The Harveian Oration

ON

HARVEY AND THE RISE OF PHYSIOLOGY IN ENGLAND.

Delivered before the Royal College of Physicians of London on Oct. 18th, 1895,

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MR. PRESIDENT,—In obeying your request that I should undertake the delivery of the Harveian Oration I am painfully sensible of the gravity of the task you have imposed on me. For 239 years, with but few intermissions, the College has, in obedience to Harvey's own wishes, assembled to commemorate its benefactors, and if we can no longer precisely follow Harvey's directions and "commemorate all the benefactors of the said College by name, and what in particular they have done for the benefit of the College," the remainder of his words are still applicable, for part of the Harveian orator's duty is "to exhort others to imitate those benefactors, and to contribute their endeavours for the advancement of the society according to the example of those benefactors." This annual office has been filled during the years that have elapsed since Harvey's institution of it by some of the most illustrious Fellows on our roll—by Garth (1697), Arbuthnot (1727), and Akenside (1759); by Mead (1723), Heberden (1750), and Warren (1768), not to mention others of more recent date, men whose names will ever remain fresh in the history of the literature and medicine of our country. I have no claim to be associated with these great names, nor with the many learned and eloquent men who have addressed you in recent years, and I should have shrunk from attempting the task your favour has imposed on me had I not felt that in asking me to undertake it you were mindful of the position which it is my lot to hold in connexion with the great hospital to which the immortal Harvey was thirty-four years physician, in which he exercised an influence over its governing body that remains to this day, and where his memory is yet held in reverential remembrance. I wish it were possible for me to bring forward from the records of St. Bartholomew's Hospital any new facts illustrating either Harvey's life or works; but many years ago Sir James Paget, in his "Records of Harvey," exhausted all that is known of him from the journals of our hospital. In the fragmentary notices of him which we there meet with he is seen as the trusted adviser to the governing body and as the maintainer of the dignity of his order rather than as the physician. In his "Prælectiones Anatomicæ Universalis" we obtain glimpses of his work in the wards of the hospital, and had his "Medical Observations" come down to us there can be little doubt that in them much would have been found which emanated from the wards of the hospital and the dissections of patients who died whilst under treatment there.

Foremost among the benefactors to our College present to the mind of Harvey when he established this annual Oration must have been Dr. Richard Caldwell and Lord Lumley, who together founded and endowed in 1581 the Surgery Lecture which, under the name of the Lumleian Lecture, Harvey held from 1615 until 1656, and in the course of which he demonstrated to the College his immortal discovery. I have failed to find out the nature of the connexion, if any, between Caldwell and Lord Lumley. The latter succeeded his father, Lord Arundel, as High Steward of the University of Oxford in the year 1558, the year before Caldwell appears to have completely severed his connexion with the University. Of Lord Lumley, Camden says "that he was a person of entire virtue, integrity, and innocence, and in his old age a complete pattern of true nobility." By the kindness of our registrar my attention has been drawn to the very interesting notice of Caldwell in Hollinshed's "Chronicles," where an account is given of the first lecture delivered under the terms of this bequest by Dr. Richard Forster, "which was celebrated by a goodlie assemblie of Doctors, Collegiate and Licentiate, as also some Masters of Surgerie, with other students, some whereof had been Academical. Dr. Caldwell, his white head adding double reverence to his person, notwithstanding his age and impotencie, made an Oration in Latin to the auditorie, the same by occasion of his manifest debilities unfinished at the direction speciallie of the President: who after a few words shortlie and sweetlie utered, gave occasion and opportunity to Dr. Forster, then and yet the appointed Lecturer, to deliver his matter." It is impossible for me to mention the long list of those who, by their munificence or by the honour which their lives and labours have bestowed on the College, have to be commemorated as benefactors since the days of Harvey. Within the present year we have had a notable example, not only of the generosity, but what is still more to be desired, of the brotherly feeling which Harvey desired should exist among us. No one among our Fellows has during the last fifty years been a brighter ornament to this College or a greater benefactor to his country or the world at large than Edmund Alexander Parkes. It must be a source of gratification to us all that Dr. Hermann Weber, when generously endowing the College with the magnificent sum of £3000 for the furtherance of original research on the "Prevention and Cure of Tuberculosis," should have associated Dr. Parkes's honoured name with his own. The triennial prize, which the College has decided to found with this bequest, will tend, let us hope, not only to keep fresh in the memories of many generations of Fellows the genial and liberal donor and his valued friend, but may accomplish the object of the giver and lead to future discoveries by which the ravages of tuberculous disease may be controlled and abated, if not altogether prevented.

It may interest the College to know that the subject selected for the first competition is "The Means, Prophylactic or Curative, deemed by the Author to have Value in the Control of Tuberculosis, especial Regard being had to their Application to Human Tuberculosis." I should like to pause here to set before you at somewhat greater length the useful, pure, and unselfish life of Dr. Parkes and to recall to your memory the excellence of his scientific work in connexion with the ingestion and elimination of nitrogen in the system, as well as to draw your attention to the benefits which our naval and military services and the general public have received from his labours in the field of hygiene; but I must pass on now and content myself with thus briefly alluding to the munificent gift of Dr. Hermann Weber and the memory of Edmund Alexander Parkes.[1]

Harvey's fame is immortal, and he is to be placed in the same category with Hippocrates, Aristotle, Archimedes, and Newton, who by their genius may be looked upon as not so much the exponents as the founders of their respective branches of knowledge. Aristotle was the first, and in a sense the greatest, of biologists. Harvey was the founder of physiology. Harvey himself was an Aristotelian, educated in all the learning of the schoolmen; and in attempting to estimate his genius and originality it is almost impossible for us in these days of independent thought to realise the crushing influence which authority then exercised on the minds of men; in the words of Dryden, they

> "betrayed
> Their freeborn reason to the Stagyrite
> And made his torch their universal light."[2]

As in medicine, although there must have been practitioners before the days of Hippocrates, he is to be taken as the starting point, so in biology, notwithstanding the labours of Parmenides, Empedocles, and others of still earlier date whose writings are known to us but by fragments, Aristotle stands alone as the originator of biological science. He, together with his immediate successors, took, as has been observed by Professor Huxley,[3] "the broadest view of the subject, and man assumed his place as neither more nor less scientifically interesting than his fellows." Harvey's admiration of Aristotle is profound; he calls him the supreme dictator in philosophy, and in the introduction to the "De Generatione Animalium" says: "Foremost among the ancients I follow Aristotle: he is my leader." Dr. W. Ogle, in the preface to his excellent translation of Aristotle's work "On the Parts of Animals," says most justly: "The biological treatises of Aristotle are more often quoted than read, and, it may be added, much more often misquoted than correctly quoted." The prominent feature of Aristotle's biological

[1] Dr. Parkes died from acute general tuberculosis, March 15th, 1876.
[2] Epistle the Third. To Dr. Carleton.
[3] Appendix to Richard Owen's Life.

writings, as, indeed, of his philosophy generally, is classification, in which respect his writings contrast strongly with the poetical and imaginative treatises of his forerunner Plato. From the time of Aristotle to that of Harvey no advance was made in physiological knowledge; in truth it had receded, overwhelmed by the glosses and erroneous interpretations so often put on Aristotle's writings.

In attempting to estimate Harvey's merits as a discoverer it is necessary for us as far as possible to realise the state of knowledge at the commencement of the seventeenth century, and the nature of his surroundings. Subsequently to the time of Aristotle, who was very imperfectly acquainted, as he himself admits, with human anatomy, the Alexandrian school, where the two rivals, Erasistratus and Hierophilus, practised human dissection, had considerably advanced human anatomy; their observations and discoveries were made use of by Galen, who added to anatomical knowledge by his accurate dissections of the lower animals, including apes. The anatomical facts thus observed were of comparatively little use through their being treated as disjointed observations; thus there can be no doubt that Erasistratus observed the lacteals in the mesentery of sucking kids hundreds of years before Aselli rediscovered them in dogs; and Aselli's observations would have proved as barren as Erasistratus's had Pecquet not traced the lacteals to the receptaculum chyli and thoracic duct, which vessel had many years before been noticed by Eustachius in the thorax of a horse, and described by him as the vena alba thoracis. With the revival of learning human anatomy began to be studied on account of its obvious bearing on medicine and surgery, and by Harvey's time, owing to the labours of Mundinus, Sylvius, Eustachius, Vesalius, Fallopius, and others, the details of the bodily structure of man observable by the unassisted eye were for the most part discovered. In physiology, on the other hand, there had been no advance whatever, unless the very imperfect knowledge of the lesser circulation be considered as having a claim to be so regarded. It in no way detracts from Harvey's merit or originality that Servetus, Columbus, and Cesalpinus all had an idea of the lesser circulation, without, however, comprehending it or seeing to what it led, or that Fabricius had demonstrated beyond doubt the existence of the valves in the veins. Dugald Stewart has remarked: "In the sciences the observations and conjectures of obscure individuals on the subjects which are level to their capacities, and which fall under their own immediate notice, accumulate for a course of years, till at last some philosopher arises who combines these scattered materials, and exhibits in his system, not merely the force of a single man, but the intellectual power of the age in which he lives."[4] Regard must also be paid to the spirit of the times, and the remarkable uprising of independent thought and inquiry which characterises the century immediately preceding Harvey's birth.

Bacon is frequently spoken of as the founder of inductive philosophy and the destroyer of the syllogistic reasoning which had been all-powerful before his day. This may be true when applied to moral philosophy, but is certainly not so when we consider physical or natural philosophy. In his biological writings Aristotle makes constant use of the inductive process, and he points out that it is absurd to suppose that syllogistic reasoning could lead to the discovery of any new principles;[5] and again he says, still more definitely, "that reasoning is naturally prior and more known that proceeds by syllogism, yet is that more perspicuous to us which is based on induction."[6] Aristotle's inveterate custom of specifying a final cause for every structure and organ which he came across in the animal body not only led him into many absurdly erroneous conclusions, but—joined with the oft-quoted maxim of Bacon, "Causarum finalium inquisitio sterilis est, et tanquam virgo, Deo consecrata, nihil parit"—has led to the wonderful work he did in biology being less thoroughly appreciated by us than it deserves. Bacon's objection to the consideration of final causes in physics was owing to his belief that it "banished the study of physical causes; the fancy amusing itself with illusory explanations derived from the former." That Bacon was wrong in this view is proved by Harvey himself, for we have it in his own words, as reported by Boyle,[7] that it was from studying the valves of the veins, and believing "that so provident a cause as nature had not placed so many valves without design," that he was first induced to think of a circulation of the blood. Equally false is the belief very generally held that Bacon was the first to revolt from the tyranny of the Aristotelian school. The alliance which had taken place between the Papal Church and the Aristotelians caused those who at the Reformation refused to recognise the infallibility of the Church of Rome also to throw off their allegiance to the tenets of the schools. Luther and Calvin, not to mention lesser men, declared that no man could be an Aristotelian and a Christian; and St. Paul's warning, "Beware lest any man spoil you through philosophy and vain deceit after the tradition of men."[8] was a favourite text for the ministers of the Reformation to expound. The same spirit of inquiry which broke down the tyranny of the Church also freed men's minds from the trammels of the dogmas of the current philosophy. The physicists, by questioning the accepted doctrines of the nature of the universe, were the first to commence this healthy movement, and the widespread popularity of Ramus's teaching very greatly expedited the change which occurred. Ramus, from the commencement of his career, disputed the authority of Aristotle, and may be said to have spent his whole life in opposing the orthodox philosophy of the times, and perished a martyr to his opinions and the rancour of his opponents in the massacre of St. Bartholomew's Day (1572). Harvey, when at Padua, must have been in the midst of the conflicting theories and bitter controversies of the Aristotelians and their opponents. His even and well-balanced mind prevented his joining either party. Throughout all his writings he pays the greatest respect to Aristotle, and takes him as his main guide in his work, "De Generatione Animalium." He makes also constant references to him in his "Prælectiones Anatomicæ Universalis"; and when Aubrey asked him what he should read bid him go to the fountain head and read Aristotle, Cicero, and Avicenna. The same authority tells us that Harvey, whilst esteeming Bacon much for his wit and style, was not enamoured of his philosophy. It would be interesting to know how intimate Harvey was with the Lord Chancellor, and whether their communications merely partook of the character of physician and patient, or whether Harvey discussed philosophical questions with the older man.

My predecessors in this office have so fully vindicated Harvey's claim to the discovery of the circulation against the attempts which have been made within recent years to deprive our countrymen of this honour that I will pass on, merely thanking Sir Edward Sieveking and Sir George Johnson for the able and triumphant manner in which they have refuted the statements put forward in favour of Cesalpinus as the true discoverer of the circulation of the blood. Neither Servetus, Columbus, nor Cesalpinus in any way anticipated Harvey, who not only discovered the greater circulation, but demonstrated it and explained the true motion of the heart. He, and he alone, recognised the muscularity of the heart's wall, and perceived and demonstrated that it was the contractile power of the heart which was the primary cause of the pulse and of the circulation of the blood through both systemic and pulmonary vessels. Harvey, by a chain of close and acute reasoning drawn from direct experiments and from observations on the pulsation in aneurysms and in vessels distal to aneurysmal dilatations and to portions of rigid and calcified arteries, demonstrated once for all that the motion and contraction of the heart was the main, though not the only, cause of the pulse. Leaving thus the "Excitatio Anatomica de Motû Cordis et Sanguinis," I wish to consider that which Harvey's discovery rendered possible—the rise of physiology—more especially in England, and the part which Harvey himself took in founding it.

It must be always borne in mind that but a portion of Harvey's work has come down to us. We gather from his extant writings that he had collected materials for, if not composed and completed, the following treatises: "Observationes de Usû Lienis," "Observationes de Motû Locali," and "Tractatum Physiologicum de Amore Libidine et Coitû Animalium." We do not know how far advanced his "Medical Observations," to which he makes frequent references; his disquisitions on the "Cause, Uses, and Organs of Respiration"; his "Medical Anatomy," or "Anatomy in its Application to Medicine," may have been. Harvey announces, in his first disquisition to Riolanus, his "intention of putting to press this last work," and it must be regarded as an

[4] Elements of the Philosophy of the Human Mind, vol. i., p. 217, sixth edition.
[5] Last chap. Metaph. [6] Analytics, Lib., c. ii., p. 3.
[7] Boyle's Works, folio edition, vol. iv., p. 539.
[8] Colossians, c. ii., v. 8.

irreparable loss that the world should have been deprived of the material he had collected, for one cannot doubt that his "Medical Anatomy" would have displayed the same master mind as is shown in his other works, and that morbid anatomy would have been advanced to the position it was placed in a hundred years later by Morgagni. As it is, we have to collect Harvey's general views of physiology from scattered passages in his works. Next to his "Exercitatio Anatomica de Motû Cordis et Sanguinis," his most important work is "De Generatione Animalium." This is an unfinished work. Harvey had probably intended to publish a larger and more complete treatise, but had failed to satisfy himself on the subject of generation, and what he was persuaded by Sir G. Ent to entrust to him for publication were but the exercises from which Harvey had intended to compile his work. Possibly the loss of his "Observations on the Generation of Insects" prevented his undertaking the larger work; but no one who reads the treatise will come to the opinion that Harvey was prepared to publish it in the shape in which we now have it. In the exercises we find much repetition both of words and ideas, much speculative matter on which he expresses no opinion. Not having satisfied himself as to the facts of generation he allows himself to be under the influence of the

"Master Sage of those who know"[9]—

and permits himself to wander off from observed facts into the shadowy but enticing realms of fancy and metaphysics. It is no detraction from Harvey's merit that he failed in understanding the nature of generation. The necessary means were not in existence; the simple magnifying glasses used for the inspection of the *punctum saliens* were unable to show him his error in supposing that the male element did not enter the uterus—a conclusion he came to after repeated inspections. Writing of the uterus of the doe after copulation he says: "I began to doubt, to ask myself whether the semen of the male could by any possibility make its way by attraction or injection to the seat of conception; and repeated examination led me to the conclusion that none of the semen reached this seat" (Exercise LXVII.); and in another place (Exercise L.) he asks "whether the conception of the uterus be of the same nature or not with the conceptions of the brain, and fecundity be acquired in the same way as knowledge—a conclusion in favour of which there is no lack of argument"; and in his essay on Conception he gives us what I imagine was his final conclusion: "The woman, after contact with the spermatic fluid *in coitû*, seems to receive an influence and become fecundated without the coöperation of any sensible corporeal agent, in the same way as iron touched by the magnet is endowed with its powers." The aphorism *Omne vivum ex ovo* is ascribed to Harvey, and often quoted as if he made use of the expression. It is true that at the end of his consideration of the development of the egg he concludes by quoting Aristotle with approval: "All living creatures, whether they swim, walk, or fly, and whether they come into the world in the form of an animal or of an egg, are engendered in the same manner." But it is quite evident from many passages in his treatise that Harvey did not unconditionally reject the doctrine of spontaneous generation. In Exercise LXIII., after stating "now we at the very outset of our observations asserted that all animals were in some sort produced from eggs," he goes on to explain his meaning more fully: "An egg is a conception exposed beyond the body of the parent whence the embryo is produced. Let us therefore say that that which is called *primordium* among things arising spontaneously, and seen among plants, is an egg among oviparous animals; the prime conception in viviparous animals is of the same precise nature"; and earlier in Exercise XLV., when discussing the difference between epigenesis and metamorphosis, he says: "Some animals are born of their own accord, concocted out of matter spontaneously." Harvey showed that the mode of development and growth was the same in the embryos of viviparous and oviparous animals, and maintained that in creatures said to arise spontaneously or to take their origin from putrefaction, filth, &c., the same developmental changes occurred; but nowhere expresses an opinion as to the origin of the ova themselves, although it is probable that he inclined to the belief that they were "propagated from elements and seeds so small as to be inconspicuous (like atoms flying in the air) scattered or dispersed here and there by the winds" (Exercise XLIII.). In the same way he expresses no opinion as to the origin of the animalcules generated in our bodies, and of the worms produced from plants and their fruit or from gall-nuts, the dog rose and various other galls, contenting himself with remarking that the living principle of the animals thus arising cannot have existed in the plants on whose juices they live (Exercise XXVII.).

Though misled from the want of proper means for observation in the fundamental facts of generation, there is much touching general physiology scattered through the treatise which is extremely interesting. Harvey remarks that he was the first to note that the bronchia or ends of the trachea in birds open into air sacs in the abdominal cavity (Exercise III.), an observation which, so far as I know, attracted no attention and did not receive confirmation until John Hunter demonstrated these air sacs afresh, and showed that the bronchia in birds were continuous also with the hollow spaces in their bones. In Exercise LVI. he has anticipated Darwin's explanation of sexual adornments, remarking: "Ornaments of all kinds, such as tufts, crests, combs, wattles, brilliant plumage, and the like, of which some vain creatures seem not a little proud, are most conspicuous in the male at that epoch when the females come into season, and whilst in the young they are still absent, in the aged they also fail as being no longer wanted." Hereditary likeness did not escape him, or that form which is spoken of as atavism, for he asks, "Why the offspring should at one time bear a stronger resemblance to the father, at another to the mother, and at a third to progenitors, both maternal and paternal, further removed" (Exercise LXII.). After the circulation of the blood and the mysteries of generation the subject which appears to have had most attraction for Harvey was that of "innate heat"—*calidum innatum*—the θέρμη ἐμφύτη of Aretæus, a term by which more was meant than the temperature, although that was the sensible evidence of it. Harvey distinguished the *anima*—soul or vital principle—from the innate heat. To the consideration of the latter he devotes Exercise LXXI., and treats at length of the former in Exercises XXVI. and XXVII. It would take me too long to attempt to give a sketch of his views of the *anima;* it is clear that he himself was dissatisfied with his own conception of the vital principle or *anima*, for he says in Exercise XXVIII., speaking of the way in which the egg is produced, "leaving points which are doubtful and disquisitions bearing upon the general question (that is, on the *anima*), we now approach more definite and obvious matters." Animal heat before the knowledge of the production of heat by chemical union was an inscrutable mystery which not even the genius of Harvey could penetrate. The maintenance of animal heat was supposed to be the gift of the heart to the blood; the belief that the heart was the source of heat was universally held by the ancients, Aristotle saying "that its wall is thick that it may serve to protect the source of heat."[10] This Aristotelian doctrine Harvey dissented from and destroyed by reasoning little less cogent than that by which he demonstrated the circulation, although he was unable to account for the presence of animal heat and imagined that it was inherent in the nature of blood and of divine origin. His words are so grand and poetic that I may be permitted to quote them at length: "I say that innate heat and the blood are not fire, neither do they derive their origin from fire. They rather share the nature of some other and that a more divine body and substance. They act by no faculty or property of the elements; but as there is something inherent in the semen which makes it prolific, and as in producing an animal it surpasses the powers of the elements—as it is a spirit, namely, and the inherent nature of that spirit corresponds to the essence of the stars—so there is a spirit of certain force inherent in the blood acting superiorly to the powers of the elements, very conspicuously displayed in the nutrition and preservation of the several parts of the animal body; and the nature, yea, the soul in the spirit and blood, is identical with the essence of the stars" (Exercise LXXI.). This outburst of Harvey is most striking, so unlike his usual manner, and one cannot but be astonished at his inconsistency, for it occurs in the same exercise as the following shrewd and calm remark: "We are too much in the habit, neglecting things, of worshipping names. The word blood, signifying a substance which we have before our eyes and can touch, has nothing of grandiloquence about it, but before such titles as spirit and *calidum innatum*, or innate heat, we stand agape," for assuredly the substitution of the phrase that the nature inherent in the blood was responsive to the essence of the

[9] Dante's "Inferno," Cant. iv., l. 131.

[10] De Part. Animalium, book iii., chap. 4.

stars is not less calculated to set us wondering than is the term "*calidum innatum*." Harvey, nevertheless, disproved for once and all the doctrine that the heart was the source of heat; he showed how animal heat was dependent on the due circulation of the blood and that the belief that the functions of the lungs were to cool the heated blood was absurd. He says: "The blood, instead of receiving, rather gives heat to the heart, as it does to all parts of the body; and it is on this account that the heart is furnished with coronary arteries and veins; it is for the same reason that other parts have vessels—namely, to secure the access of warmth for their due conservation and stimulation, so that the warmer any part is the greater its supply of blood, or otherwise—where the blood is in the largest quantity there also is the heat the highest." The "Prælectiones" are but notes to assist Harvey whilst lecturing, and it is therefore impossible to know what interpretation to place on them, but I think it highly probable that in the course of years Harvey, as his physiological knowledge increased, modified his views of the connexion between animal heat and the heart, for in the "Prælectiones" he speaks of the heart as the *fons totius caloris*, and calls it *arx et domicilium caloris* from which it appears that in 1616 he still held the Aristotelian opinion as to the heart as the source of heat. No portion of the "Prælectiones" show more strikingly the closeness of Harvey's observation, the amount of his knowledge, and the acumen of his reasoning than that relating to the exposition of the anatomy and the functions of the lungs. In his description of them and the pleuræ he makes constant references to their morbid anatomy and their embryonic condition. He is evidently in doubt whether the lungs expand and contract from their own movements or merely follow the movements of the thorax—a question which was afterwards fully investigated and explained by Mayow. The immediate followers of Harvey naturally turned their attention to the subjects on which he had thrown so much light—the circulation and respiration. Most notable among them were two distinguished Cornishmen, Richard Lower and John Mayow; the former is the best known from his experiments on the transfusion of blood, which attracted the attention of the general public, but those experiments are by no means the most important of his physiological researches; in addition to demonstrating in many ways that the red colour of arterial blood was due to the action of the air, he calculated the force of the heart and the quantity of the blood passing through it. He showed also by demonstrations on dogs that œdema of the parts distal to the heart followed ligature of the veins, and produced ascites by tying the vena cava in the thorax. Lower also was the first to show the dependence of the heart's action on nervous influence and to demonstrate the moderating effect of the pneumogastric nerve on the heart.

Mayow, though recognising that there was an interchange between the blood and air in the lungs, still thought that the source of vital heat was in the heart, "not that it contained a biolychnium (that is, a vital torch) flaring within it, but that from its perpetual motion for carrying on the circulation the nitro-aerial and sulphureous particles in it must be in a state of perpetual effervescence, and that necessarily remarkable heat must be excited."[11] Mayow thought that air was impregnated with a certain universal salt, which was of the nature of nitre, and with vital spirit, and with fire; notwithstanding this erroneous view of the nature of air, it is remarkable how closely his explanation of the action of this imaginary salt on the blood agrees with the actual action of oxygen, and he sums up his conclusions as to the uses of respiration as follows: "Life consists in the distribution of animal spirits which must be supplied for the pulsation of the heart. In very truth it is highly probable that the aerial salt is necessary for any muscular movement, so that without it no pulsation of the heart is possible."[12] In his essay "De Respiratione Fœtus in Utero et Ovo" he correctly infers that the blood of the fœtus obtained through the umbilical arteries not only nourishment, but also aerial salts which obviated the necessity of functional activity in the lungs during intra-uterine life, and states definitely that the placenta should not be regarded as an amplified liver, but as a uterine lung. It is not for his chemico-vital theories alone that Mayow deserves to be remembered; he first accurately described the action of the intercostal muscles and diaphragm, and showed that inflation of the lungs depended on atmospheric pressure. It was not until upwards of a hundred years later, when Black had shown the presence of carbonic acid in expired air and investigated the phenomena of latent and sensible heat, when Priestley had isolated oxygen, and Cavendish and Lavoisier had completed the analysis of atmospheric air, that any real progress could be made in the study of respiration and animal or vital heat. Even now we are by no means fully acquainted with this most complex and difficult subject. Your Croonian Lecturer pointed out a few months ago some of the many difficulties which still have to be surmounted before we can arrive at an adequate knowledge of how and where the interchange between the oxygen of the air and the tissues takes place, and how our systems accommodate themselves to the changes of pressure and temperature in the air, so as to maintain the animal heat at a uniform level.

I have endeavoured, very imperfectly I fear, to set before you the rise of physiology in England. Before the discovery of the circulation of the blood a right understanding of the means by which life is carried on was impossible, and Harvey's discovery should rank on the same level as Newton's discovery of gravitation. In both cases others had to a certain extent prepared the way and may have had glimpses of the truth, but to them the truth was revealed, and they might say with Tennyson's Holy Sage,

> "Idle gleams to thee are light to me,"

and the light which their genius led them to perceive enabled their successors to reveal what we now know of the mysteries of animate and inanimate nature. We know very little of Harvey's practice as a physician; what little we can gather from his writings show him to have been fertile in resource and skilful in the management of gynæcological cases. We cannot doubt that one who showed such acumen in deciphering the problems of life, and who speaks so wisely of the necessity for the study of morbid anatomy, must have been far ahead of the rest of his contemporaries in the application of his knowledge to clinical work; and the disparaging gossip of Aubrey merely reflects the opinions of those too ignorant and too bigoted to appreciate him.

I have already spoken of the overpowering authority of Aristotle over the minds of the students of nature, but the completeness of his dominion was not to be compared to the overwhelming influence of Galen in the medical world during the sixteenth and early part of the seventeenth centuries, and it needed yet another than Harvey to enable men to throw off the benumbing mantle of Galen. Our College annals recount, as pointed out by our learned librarian in his Roll of the College, that in the year 1559 Dr. Geynes was refused the Fellowship because he had ventured to doubt the infallibility of Galen; and in our annals it is stated that Dr. Hook was not granted admittance to the examination for the licence because he had the honesty to say that he had not read Galen. The revival of anatomy had by Harvey's time somewhat undermined the authority of Galen, which was still further impaired by Harvey's own discoveries. Nine years after Harvey's death appeared Sydenham's "Methodus Curandi Febris, Propriis Observationibus Superstructa," &c., and the world became aware that one had arisen who brought independent thought, unbiased by the traditions and views of the various schools of medicine, to bear on the study of disease. Our ignorance of the details of Sydenham's life renders it difficult to express an opinion as to the position he occupied in society or among his professional brethren in the year 1666, when the "Methodus" first appeared. He had then been settled in Westminster for ten years, and his intimacy during his Oxford life with Locke and Boyle, to whom he dedicates the work, makes it probable that from his first arrival in town he must have mixed with those bright and inquiring minds who instituted the Royal Society; be that as it may, his treatise at once attracted their attention, and in the same year in which it was published we find it reviewed in the "Philosophical Transactions of the Royal Society," then in the second year of its existence. I will not stay to consider how great or how small were Sydenham's literary acquirements, or whether he wrote his works in Latin or whether they were translated from the vernacular by Dr. Mapletoft and Mr. Havers; the subject is fully treated of by Dr. Latham in his "Life of Sydenham," and I know of no fresh evidence that has been obtained. Whatever may have been the amount of Sydenham's scholarship, no one who reads his works can fail to see from his

[11] De Spiritibus Animalibus, chap. iv., p. 31.
[12] De Respiratione.

frequent allusions to Horace, Lucretius, Seneca, and others. that he was intimately acquainted with the Latin classics, and, like Dr. Latham, I should be sorry to consider that his admiration for Hippocrates—the divine old man—was taken at second hand. As to the other disputed point, whether Sydenham served as an officer in the Parliamentary army, the question has been set at rest by the discovery in the Record Office of a petition to the Lord Protector signed by Thomas Sydenham and endorsed "Captain Sydenham's Petition."[13]

Nurtured during the Civil War, the rough and turbulent early life of Sydenham left, perhaps, its stamp upon his character—a thoroughly upright, honest, God-fearing man, but somewhat intolerant of opposition, and of singular independence of mind. He had not the sweet nature of Harvey, which appears to have enabled that gifted man to have lived in peace with all men; but we must, I think, receive with caution the few contemporary anecdotes which have come down to us concerning him. It is pretty certain that Sydenham thought Sir Richard Blackmore a pedant and prig—an opinion shared by many, for, besides Dryden's well-known castigation of Sir Richard Blackmore, we have the following description of him by a contemporary:—

> "By Nature formed, by want a pedant made,
> Blackmore at first set up the whipping trade;
> Next quack commenced, when fierce with pride he swore
> That toothache, gout, and corns should be no more.
> In vain his drugs as well as birch he plied,
> His boys grew blockheads and his patients died."
>
> Col. Coddrington.

The oft-quoted story of the advice Sydenham gave him to read "Don Quixote" was probably only passing on that which Locke had given Sydenham, for the former says: "Of all the books of fiction, I know none that equals Cervantes's 'History of Don Quixote' in usefulness, pleasantness, and constant decorum."[14] And it may also have contained a covert allusion to the fictitious character of most medical writings. Sydenham's independence of mind is the key to his position in medicine. The opening paragraph in the preface to the first edition of the "Methodus Medendi" exhibits to us the serious and lofty view that Sydenham took of the physician's duty, whilst in the greatly expanded preface to the third edition he instructs us as to the means by which the science of medicine was to be advanced. It was his determination to study diseases as they presented themselves to him, keeping the peculiar and constant phenomena apart from the accidental and adventitious, and laying aside all hypotheses as to their nature, which enabled Sydenham to draw up those pictures of gout, dropsy, and fever which will remain classical for all time and justly entitle him to be called the modern Hippocrates. From Harvey's physiological teaching, and from clinical observations carried on in the spirit of Sydenham, our present knowledge of disease became possible. Harvey's work and writings had no direct influence on Sydenham; the latter makes no reference anywhere to Harvey, nor does he seem, in his treatise on "Dropsy," written in 1683, to have seen the bearing which Lower's experiments, made fourteen years previously, of ligature of the veins had on dropsy. Sydenham considered "weakness of the blood" to be the sole cause of dropsy, and throughout his writings he nowhere alludes to the physiology of the tissues. He quotes Hippocrates with approval, as blaming those who in their exceeding curiosity and officiousness busied themselves in speculations on the human frame, and, whilst admitting that more than one valuable medicine had been obtained from the chemists, blames those who thought that medicine could be promoted by the new chemical inventions of his day;[15] and he further on says: "The whole philosophy of medicine consists in working out the histories of diseases and applying the remedies which may dispel them; and experience is the sole guide."[16] Yet Sydenham himself had his theories, and, viewed by the light of our present knowledge, very incorrect ones, which were not in advance of those of his predecessors. Without theory—or, in other words, general principles—experience is a blind and useless guide. Rational theories of disease and its treatment can only be founded on physiological knowledge, and until, comparatively speaking, a very few years ago the knowledge of physiology and the knowledge of medicine were inseparably connected, for, with very few exceptions, the former was cultivated by medical practitioners alone, and may, without disrespect, be said to have been parasitic on medicine.

This is no longer the case, for using the term in its widest sense, as embracing the study of life, whether under normal or abnormal conditions, it has become the largest division of the natural sciences, throwing out like a gigantic tree huge branches from its main trunk, which depend more or less for support on chemistry and physics, and embracing within its ample boughs a vast series of subjects with whose rapid growth it is beyond the powers of any man to keep abreast. What is to be the future relation of it to medicine, or, rather, I should say, of medicine to physiology? The old position is reversed, and medicine—that is, the study of the manifestations of disease, its origin, course, and the means of alleviating its effects or preventing its occurrence—may be regarded as a branch of physiology, and one not less scientific than the observation of physiological phenomena in the laboratory. The practitioner of medicine turns to the physiologist, the bacteriologist, the chemist, and the physicist for aid in unravelling and explaining the symptoms he observes and has to deal with, and so long as they work together in the spirit which influenced Harvey and Sydenham—the pursuit of truth—the world must be the gainer.

The very brilliancy of recent discoveries and the vast increase in our knowledge may for a time react prejudicially on the art of medicine. Are we not in danger of being carried away by our enthusiasm? And may we not fall into the predicament, described many years ago by Buckle, of our facts outrunning our knowledge and encumbering our march? More especially does this difficulty arise in the training of our students; so vast is the range of subjects bearing on medicine, and so important does each appear to those best acquainted with them, that there seems to me danger lest, in endeavouring to secure an acquaintance with them all, we may forget that the future life of the majority of those entering our profession is to be spent in ministering to the victims of accident or disease, and that for the due recognition and treatment of sickness and injury experienced and trained clinical observation is absolutely necessary; no amount of laboratory training will enable a man to recognise the nature and proper mode of reduction of a dislocation, or know scabies when he sees it, and the words of Sydenham to his dear friend Dr. Mapletoft, "The art of medicine can be properly learned only from experience and exercise," will always hold good. There is no need to urge on the Fellows of the College another of Harvey's directions to the Orator of the day "to search out the secrets of nature by way of experiment," for at no period during the existence of our College have they manifested greater activity in that direction than at the present.

The great scientist who has recently passed away in the fulness of years and fame has opened to us new and most fascinating fields for future research, pregnant, I believe, with an abundant harvest of which he himself was permitted to see the first fruits; working out with scientific patience and accuracy the clue afforded by Jenner's discovery of the efficacy of vaccination in small-pox, Pasteur not only threw light on the darkness which surrounded the communicability of specific diseases, but placed in our hands a means to fight them. Pasteur has gone to his rest surrounded with all the honours a grateful nation could pay to his memory, and I know not that I can bestow a higher tribute to his genius than by saying that he will worthily be placed in the Temple of Fame by the side of our Harvey, both men honoured alike for the blameless character of their lives and the brilliancy of their discoveries. If we, as a nation, have not been able, through the action of our Legislature, to bear our full share in the furtherance of Pasteur's discoveries, we have at least the satisfaction that Lister was the first to recognise their bearing on morbific processes and to introduce new principles into surgery, which have added a hundredfold to its powers. The later developments of Pasteur's discoveries in the hands of Koch, Behring, Roux, Klein, and a host of equally earnest inquirers, have had in medicine a correspondingly important and beneficial effect on our conceptions of disease and its treatment. Remarkable as has been the nineteenth century in the development of science and its application to the needs of mankind, in no direction has it been more remarkable than in the progress of medicine. The introduction of anæsthetics marks the middle of the century, and its close will in the future be ever memorable as the era in which we commenced to have a truer and fuller insight into the causation and nature of disease

[13] A copy of the petition, together with other remarks, was published by Dr. Gee in St. Bartholomew's Hospital Reports, vol. xix., p. 1.
[14] Some Thoughts concerning Reading and Study.
[15] On Dropsy, par. 23, Sydenham Society's Trans.
[16] Op. cit., par. 45.

than the world had yet seen. Let us all, then, strive to work after the examples of Sydenham and Harvey, in the confident hope that as our knowledge advances we shall obtain greater powers of control over disease in all its forms and become provided with new and more potent means for the mitigation of pain and suffering.

An Address

ON

SOME OF THE CHANGES IN THE SURGERY OF THE LAST SIXTY YEARS.

Delivered at Oxford before the Medical Society on Oct. 18th, 1895,

BY SIR GEORGE MURRAY HUMPHRY,
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GENTLEMEN,—On this day, fifty-nine years ago, my professional career commenced with an apprenticeship at Norwich, where I was initiated into the varied and practically useful work of a surgery under the direction and training of the most energetic and incessantly working, and one of the most learned and able, surgeons I have ever known, who, in spite of the engagements incidental to a large general and consulting practice, used regularly to examine me and my fellow pupils in our studies and who, in addition, gave me an early interest in the work of a pathological museum which has lasted through my life. It was no small privilege to be thus placed and to be a dresser and a case-taker in that Norwich Hospital which has been the scene of the labours of so many eminent physicians and surgeons. It was a happy time; I soon came to love the place and my work and those with whom I was associated, and it was, as you may suppose, a source of melancholy to me the other day, when I was there, to find that, owing to recent alterations (improvements?) in the regulations for medical study, there was not a single student to take advantage of that fertile field of knowledge and to take part with and stimulate and cheer the medical officers in their work. The Norwich Hospital without a student and the London hospitals overcrowded with them. This ought not to be. It is a grievous waste of practical opportunity and a serious loss to our profession and to the public that it is so. Having been on hospital duty as dresser, clinical clerk, or surgeon almost unremittingly from that day to this, at Norwich, St. Bartholomew's, and Addenbrooke's Hospitals, an unusually long and much favoured career, I do not know that I can better employ the time at our disposal than by giving a brief sketch of the changes I have witnessed in that period—changes which, in the main, have centred themselves about anæsthetics and antiseptics, and which rival the extraordinary social changes which have resulted from steam and electricity. In the museum to which I have referred there was a large ovarian cyst extracted through an incision in the linea alba successfully by Mr. Jeffreson of Framlingham. This was the forerunner of the marvellous results—the most marvellous, I think, in the history of surgery—which have since been attained in that direction by modern improvements. I well remember the respect with which I looked at and thought of this specimen in the days when tapping afforded the relief, and that a temporary one, from that distressing and fatal malady. There was also a calculus weighing fifteen ounces successfully extracted by a Norfolk surgeon in the presence and with the aid of Gooch and represented in his work on Surgery, and which stands, I believe, as the greatest triumph ever accomplished by the lateral operation of lithotomy. Now that operation, which was the pride and glory of my early life, which I thought one of the best and most unexceptionable of operations, seems in the way of being supplanted by litholapaxy and the supra-pubic method.

Let me narrate two cases which are good illustrations of the contrast between the past and the present. On the evening of Oct. 11th, 1838, a man aged twenty-six years, while carrying a sack of potatoes, fell with the right lower limb doubled under him, dislocating his hip into or above the sciatic notch. Attempts at reduction were made next morning at the Norwich Hospital by varied methods of manipulation and extension by pulleys. These were continued for four hours, during which time sixteen ounces and then twenty ounces of blood were drawn from the arm, and tartar emetic to the amount of twelve grains was given. Finally the man was taken to bed with the dislocation unreduced. He became feverish and delirious, with inflammation of the veins of the arm and about the hip; large abscesses formed and were opened in the hip and thigh, and after a lingering illness death ensued. One can scarcely conceive the occurrence of so disastrous an affair at the present time. In another case of a similar dislocation in a man of the same age, treated the morning after the accident at the same hospital in April, 1837, the same methods were applied; thirty ounces of blood were drawn, six grains of tartar emetic were administered, and not till after two hours and a half was reduction effected. The man recovered with a useful limb. Now, it is not too much to say that at the present day, in all probability, by the aid of an anæsthetic and the modern method of manipulation based upon better knowledge of the lesions accompanying the accident, the same surgeons would have reduced each of these dislocations in a few minutes. I say the same surgeons, for they were men of ability, well practised in surgery and supplied with the best apparatus and assistance which a large hospital provided at that time. The fault was not in them, but they had not the means and the additional knowledge which we now possess. We are no better than they, but we are better equipped to meet these and other contingencies in practice, and our patients are proportionately better off.

We dressers used to folow the surgeons round the hospital, each carrying a board laden with unguents and plasters and lint and tow, and a variety of appliances which were freely used in the dressing and redressing of wounds—too freely, as I even then ventured to think. The example and morale of Kneller's sagacious "Sympathetic Cure" made an early impression on my mind, and the plastering, undoing, and replastering of stumps, with the pulling at the ligatures and other devices which I saw practised, were a source of much distress to me, so that when I came to have the direction of affairs, as surgeon to Addenbrooke's Hospital, I discontinued these applications altogether, leaving the wounds, especially those after operations, freely exposed to the air without covering of any kind, the edges of course being united by sutures. The plan answered well, the wounds healed better than under the dressing method, the relief to the patient by the lessening of surgical interference was great, any discharge that escaped was easily cleaned away, and I regretted that other surgeons showed reluctance to adopt this simple open-air treatment. Happily, however, this good thing soon had to give way to a better—to the antiseptic—method, based upon a knowledge of the deleterious influence of air-borne micro-organisms, the ready acceptance of which throughout the civilised world has done more to extend the range, and promote the success, of surgery than anything in the whole history of our art; and the treatment of wounds, which was in my early days, and still more before them, the opprobrium, is now the glory, of surgery. Who would have dared in my early time to make exploring excursions about the peritoneal cavity, to cut into or remove a kidney, to cut out gall-stones, to open up the brain, and perform a variety of other operations, some of which are now of everyday occurrence—namely, excisions of joints and arthrectomy, radical cure of hernia and varicocele, removal of the thyroid gland and of the testes for senile prostatic disease, of the appendix cæci, the pylorus, and other portions of the intestinal canal, and the closure of perforating ulcers of the stomach. One day in the week used to suffice for the operating day; now a portion, often a considerable portion, of each day is in some hospitals devoted to this work. How greatly has the animal absorbable antiseptic ligature contributed to good results. Secondary hæmorrhage after operations, one of the sore trials of my early life and one of the sources of grave disaster to our patients, now scarcely ever occurs. The tied vessel heals without suppuration or ulceration, and is sealed whether a clot forms in its interior or not. Setons, moxas, and issues, in which we had much faith—at any rate, which we employed much—are almost forgotten, having given way to massage, douching, and other milder methods. That horrible compound, the black draught, the then so largely accredited

panacea, is now rarely administered, while such a host of new and milder remedies have entered the field that one almost wonders how disease can hold its ground at all. Curious problems are presented by the processes—the combinations of accident, observation, and reason—by which these various remedies have come into use and acquired confidence. Much might be written on this.

Perhaps the most extraordinary change which has taken place is in the matter of blood-letting. Persons, generally about middle age, used to come to the surgery at spring and fall to be blooded, and I calmly would take away, at a shilling a head, *pleno rivo*, sixteen or twenty ounces, and the good people did not seem the worse for the loss, either in body or pocket. What the real effect was upon them it would be interesting to know, and it would be still more interesting to know what would be the effect if the same procedure were now adopted. In the hospital also the lancet was freely employed in the treatment of a variety of inflammatory and other affections, and, as I have narrated, in the reduction of dislocations. How many medical men who have been fifteen or twenty years in practice have never seen venesection and do not know how to perform it. It has gone, as it were, out of the memory; it went suddenly, and it now scarcely occurs to the practitioner as a means of treatment. If it did occur to him he would be afraid to have recourse to such a proceeding, partly because it is so unwonted, so unknown, and partly for want of knowledge how to do it—that at least is the case with many. It is scarcely credible that so great a change in the use of so potent a weapon can have taken place in so short a time. One cannot help asking if the change is quite creditable. Either the over-use in the past must have been wrong or the total disuse in the present must be so—probably both; for the human constitution cannot have so altered in that period as to justify the change. The pendulum of fashion, we must admit, is not without its swing—its potent, its too potent, swing—in medical ideas and medical practice as in other matters, and I cannot doubt that venesection affords an illustration of such an influence. Nor can I doubt that lives are now often lost and maladies prolonged for the want of judicious recourse to it. Some years ago I was called to a middle-aged man of average strength suffering from an attack of severe pain in the chest (pleuritic) with the usual accompanying symptoms. In accordance too much with routine I prescribed the applications and medicines then in vogue. In a few days he died. A year afterwards I was called to his brother, the counterpart of himself, lying on the same bed with the same malady and precisely similar symptoms. I bled him to twenty ounces and in a few days he was well, leaving in my mind the conviction that had the treatment in the first case been like that in the second the result would have been the same. A man past middle life was suffering under dyspnœa with some bronchitis, labouring and intermitting action of heart, and albuminuria. To my suggestion of the loss of a few ounces of blood the surgeon in attendance replied: "What! bleed a man with intermitting pulse and albuminuria? You must bear the responsibility and carry out your treatment." I did so, taking about sixteen ounces from the arm, which was well borne and gave relief. Some months afterwards the surgeon, meeting me, said: "You saved that man's life; the bleeding was the right thing." I am glad to notice that the tide of feeling is ebbing a little and the opinion gaining ground that in some cases venesection may be resorted to with advantage. It is remarkable how well loss of blood from wounds is commonly borne, how in urgent cases the blood-stream may be supplied by warm water with a little salt, and how soon persons recover from prolonged and copious drainage of blood caused by uterine or rectal maladies. These experiences, together with those of bygone days, may give some courage to those who feel that venesection still deserves a place among the recognised means of combating disease.

Vaccination has not only proved one of the greatest boons that ever accrued to mankind through our profession, it has also been a source of profound interest and speculation, to me at least, for many years in a physiological and pathological point of view. Did it stand alone? Were its results altogether exceptional? Was the immunity from a given disease (small-pox), engendered by the insertion into the system of a minute quantity of the poison of that disease modified by its passage through another animal, to remain the solitary example of that kind of phenomenon, or were we to look for other like examples and the unveiling of new and far-reaching principles through them? I often wondered that the advocates of the "similia similibus" doctrine, in their vain efforts to find some reasonable ground for their theory, did not alight upon, or make more of the practice and results of, vaccination coupled with those of inoculation. Here was to hand the unmistakable evidence of a disease being hindered or prevented or stopped by the modification by the like, that is to say, of that which caused it. By inoculation—the introduction, that is, direct of the poison of small-pox—the disease was produced; by vaccination—the introduction of the like of that poison—the disease was prevented. Prevention and cure are near allies; and was it not possible, indeed probable, that cure might be effected by means like those which staved off disease? These thoughts often occurred to me and doubtless to others. It is no small thing to have lived to see these ideas confirmed, to learn that immunity from other diseases besides small-pox is attainable by the introduction into the system of minute quantities of the modified essences of the diseases, and to dwell now in the midst of the lively discussions and observations which are going on respecting the influence of similar methods in the cure of diseases. Should our hopes in the direction indicated be realised, it is scarcely too much to say that the greatest discovery, the one most conducive to the welfare of mankind, in our generation will have been made—a discovery in therapeutics surpassing even those of anæsthesia and antiseptic methods in surgery. Vaccination, moreover, has proved an illustration of the great principle that good is rarely unattended with evil, and, further, of the fact that many fail to estimate rightly between the good and the evil. It would be difficult to point out an instance where the good really preponderates so much as in vaccination, yet the clamour against it has necessitated a Royal Commission, and that commission finds difficulty in issuing its report and making suitable recommendations.

Greater accuracy in the diagnosis, the noting, and the treatment of disease, leading almost to revolution in several branches of our profession, has been effected by the microscope, the stethoscope, the ophthalmoscope, the laryngoscope, and the cystoscope—by the clinical thermometer as well as by the introduction of new instruments of various kinds, tempting possibly somewhat too much to their use, in the invention of which the skill of the surgeon and that of the mechanician vie with one another. All these alterations, which are for the most part improvements, and more especially the greater attention to sanitary arrangements, have led to a decided prolongation of human life as well as to a diminution of suffering.

While thinking over these changes, and others which time fails me to mention, in the means and surroundings which the last half century has brought to the medical man, and over the wide possibilities for good attendant on them, one cannot help wondering a little upon the medical man himself. He has accommodated himself well to the shifting of things about him. He has become accustomed to, and is more receptive of, new ideas. The *rôle* that he plays in the service of his fellow men has enlarged. He sees more of the world and enjoys the culture resulting therefrom. The dog-cart and the brougham are largely substituted for the saddle, and his life is altogether easier and more comfortable than it was. But as to the man himself the problem is more difficult. Greater opportunities and powers do not necessarily make greater or better men. When I recall the men with whom I was associated in my early life I bring before me so many of high stamp, of honourable feeling and upright character, professionally and generally well informed, highly revered by myself and others, the real trusted friends and advisers of their patients, that one may search in vain to find their superiors in the present generation. The dispensing and charging for medicines, then so general, never appeared to me to lower them in the estimation of others. Character and knowledge, then as now, were the bases of respect. Time has altered the surroundings much, but the men have changed little, which accords with the teachings of history in our own profession and the human race generally. The men of old were, as far as we can judge, as great and as good as those of to-day; and whatever comparisons we may make with regard to the circumstances in which we live we have no right to be especially proud of ourselves. I do not know that medical men have now greater interest in their science, greater appreciation of their work, or a higher sense of their responsibilities in connexion with it than they formerly had. I do not think that we are justified in asserting, as has been recently done, that "an almost entire transformation in surgical ideals has occurred," or

that there has been "a wonderful unfolding, enlarging, ennobling of the thought, spirit, aim, and ideal of surgery." So far as I can judge, the spirit, aim, and ideal of the seniors in my early life were as high and as noble as those of my juniors at the present time. They would have hailed with as much pleasure, and with the same motive, as is now done the increased means afforded for doing good in their generation.

Examination and education have shared in the general change, we will hope, somewhat for the better. I may be, and it is natural that I should be, *laudator temporis acti*. Certainly I often congratulate myself that my lot was cast in the days before examination tests and subjects of study were so numerous and *régime* so strict; when we were more free and there was little to damp our pleasure in our work. The enormous advantage of pleasure in study is, and must be to some extent, sacrificed to what is, perhaps, the necessity of examination test. I hope the general standard is raised, but I think we are apt to forget that the faculty of acquiring and retaining knowledge does not increase with the increase in the number and range of subjects any more than the power of digestion increases with the increase of food taken. Indeed, both brain and stomach are liable to be weakened by overloading. There is, to my mind, too great a mass of facts heaped on the memory, too little reflection on them inculcated, too great a straining after the directly practical, too little aspiration for the principles upon which good practice must be based, and too little of the kind of teaching which Lawrence and Latham and Brodie gave us. The sciences of physiology and histology have become, and those of pathology and anatomy are becoming, more separated from medicine—delegated, that is, to special teachers and special examiners, greatly, doubtless, to the advantage and width of scope of those sciences and to the greater knowledge of them; but I fear there is hereby engendered a tendency to take the student too far afield, and the remark applies to the so-called preliminary scientific subjects. It is apt to lead too much to meandering in altitudes, too little to steady straight-going upon *terra firma*, too much to pride and obtrusiveness of supposed higher knowledge, too little to reasoning and too little to power of reasoning upon simple data, and too little to that sort of reasoning which constitutes the basis of "common sense." The scientific and the practical, in short, become too much separated, and what is needed is a greater regard to that connexion between the two which should be maintained through the whole period of study. Upon examination methods I will not enter; they have recently been discussed in another place by one singularly qualified to judge. I will merely observe that they should test the qualities of readiness and briskness as well as those of calm, sober thought; for both are of so great importance in the practical work of our profession.

Prophecy is but inference from the knowledge of the past, and what does the past tell us of the future? It tells us that progress is sure to go on—to go on in medicine at about the same rate as in other sciences, but how and in what directions the progress will be made we cannot tell. The future, we may be certain, will differ from the present, but in what the differences will consist is not within our ken. The "blindness to the future kindly given," humiliating though it be, acts as a never-failing stimulus to our energies and our hopes. Great discoveries and great improvements in medicine have rarely been reasoned up to. The science is too difficult for that. They come like lightning flashes and take effect only where fuel is ready to be ignited. They are going on all around us, and it is the business of such societies as this to turn them to account and to photograph them. No one of your meetings takes place without bringing the opportunity for this. Each fact brought before you is a flash to be fixed and to kindle some thought. The facts may seem to be simple, but the inferences from them may be valuable. Any apparent dulness is probably not in ourselves, but in those who do not appreciate them, who, perhaps, have become too much accustomed to them to heed and scrutinise them. An ordinary case of hydrocele—the simplest of diseases—your society would, perhaps, consider to be beneath its notice; yet how little do we really know of it. How comes it and why does it defy all treatment, local and general, except the trocar? How much of physiology and pathology is hidden in it. *Ex hoc uno disce* not to despise simple cases, but to come to your meeting prepared to listen and to think over them as well as to communicate from your own stores, more particularly if you have anything new, or apparently new, to say or suggest about an old thing. Then will you come with pleasure, and profit by the coming.

An Address
ON
THE SURGICAL ASPECT OF TUBERCULOSIS.

Delivered at the Opening of the Manchester Medical Society on Oct. 2nd, 1895,

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SURGEON TO, AND LECTURER ON SURGERY AT, THE LONDON HOSPITAL; EXAMINER IN SURGERY AT THE UNIVERSITY OF CAMBRIDGE.

GENTLEMEN,—The changes in surgical affairs have within recent periods been so many-sided that it is probably well to pause now and then to review the nature and import of some of these revolutionary phases. Among them not the least interesting is that which concerns the attitude of surgery towards certain common tuberculous lesions. Less than fifty years ago it was assumed that tuberculosis lay beyond the province of the already sufficiently aggressive surgeon. The surgeon was allowed to take a languid interest in a disorder called scrofula, although his powers for good extended little beyond the application of iodine with a paint brush. The laying on of iodine served to replace the laying on of hands which in the seventeenth century gave to kings the privilege of curing this affection by the touch. Scrofula was in every way a convenient disorder. It was a cloak which covered a multitude of pathological sins. It represented something in the blood; it had a whispered relationship to syphilis; there was about it something of the attractive romance which attaches to an obscure domestic scandal. In reality the term stood, like the algebraical *x*, as representative of a profound quantity of ignorance. There was little agreement as to what scrofula really was, except to the extent that it admitted a large factor of the unknown. As soon as the term "tubercle" crept into existence scrofula and tuberculosis began to play the part of two Dromios in a tedious Comedy of Errors. Among the minor benefits which mark the close of the nineteenth century must be placed the discovery which brought this drama to an end. Nothing in the literature of medicine can compare with the great war of words which waged around these two time-worn terms. For more than one hundred years there was no peace in the pathological camp, and no assured period of silence fell upon a turmoil which was never other than wearisome. Hither and thither these two terms were bandied, with infinite vicissitudes and troublous importunity. At one time all the diseased conditions under dispute were ranked as scrofulous, and at another time as tuberculous; while now and then the agnostic of the time would declare that there was no scrofula or no tuberculosis, according to whichever mood suited his parable. Each writer defined the expressions "scrofulous" and "tuberculous" according to his individual lights, and in the resulting confusion of tongues the words had a meaning only to those who used them. One patient author has written the history of this conflict. His work—"The Chronicles of Tuberculosis"[1]—contains much of what little romance belongs to medicine and provides a strange picture of the development of a scientific creed. The work—although concerned mainly with the literature of modern times—includes the expressions of no fewer than 637 writers upon the subject.

It is difficult to avoid the temptation of alluding to a few crises in this great discussion. Scrofula was originally considered to be exemplified by the familiar chronic gland swellings in the neck, and later the term "tuberculous" was assumed to be most suitably applied to phthisis. It will be no matter for wonder that the conspicuous and disfiguring gland disease had a place in the nomenclature of medicine before pulmonary phthisis had been differentiated from among the numerous chronic

[1] Die Geschichte der Tuberkulose. By Dr. August Predöhl. Hamburg, 1888.

affections of the chest. To the clinical observer the unwholesome-looking child with his swollen neck had become a clear individuality while yet the great world of pulmonary disease was without form and void. The χοιράδες of Hippocrates was rendered into Latin as scrofulæ, and the word in due course became English. Hippocrates and Galen considered scrofula to be due to a cold and pituitous condition of the humours, and this pretty fancy, this baseless fabric of a disease, remained an item of scientific knowledge for many centuries. Throughout the voluminous history of the seventeenth century this conception of scrofula still flourished, and there were few who did not cling to the gospel of the pituitous humour. Some, like the great Wiseman,[2] were led away by a belief in a peculiar acidity or acrimony of the blood, but the majority clung to the old faith. In the sixteenth and seventeenth centuries scrofula was, according to the views of the time, a widely prevalent affection. It was popularly spoken of as "the evil," and it stood forth as one of the great scourges of the day. Tuberculosis had not yet appeared upon the scene, and the term "tuberculous," when it was first employed, had about the same anatomical meaning as the term "nodular."

The increasing study of pathology led to a fuller knowledge of the post-mortem appearances in pulmonary phthisis, and then followed the first great event in the history of tuberculosis. About 1679 it dawned upon Francis Sylvius[3] that there was a resemblance between the changes noticed in phthisical lungs and those which had long been familiar in scrofulous glands. Sylvius went so far as to maintain that the morbid processes involved in the two diseases were the same, and that the tuberculous masses found in the lung were identical with those so often seen in the glands. To give reality to his belief he assumed the existence in the lung of minute lymphatic glands, which became swollen and, in due course, caseous and broken down. Thus, pulmonary phthisis became to be regarded as scrofula of the lung, and for long this theory held good.[4] Tubercles of the lung were soon very generally recognised, and the description of phthisis given by the ingenious Matthew Baillie in 1793 leaves little to be desired.[5] Early in the present century the second great event in the history of tuberculosis was reached. Bayle and Laennec[6] recognised the primary importance of the tubercle, and described with precision its exact anatomical condition. Laennec prepared the way for the recognition of tubercle as a product of parasitic nature. Scrofula was now dethroned and became a mere humble appendage of tuberculosis. The pituitous humour disappeared for ever, and the miliary tubercle reigned in its stead. There then followed an idolatry of the tubercle, which was no whit less fervent than the present worship of the bacillus. Laennec and his followers held up upon the point of a needle a minute grain, smaller than a millet seed, which they had isolated from a phthisical lung, and affirmed that it was the very cause of that dire disease. They claimed to have discovered a pathological element, and to hold on the needle point the secret of a mystery and the veritable seed of a disease. It seemed, indeed, as if the man of science had reached the actual confines of human inquiry, and that beyond the little speck on the needle there was only the unapproachable problem of the universe. There soon followed the third epoch in this changeful history. Buhl,[7] in 1857, ventured to regard miliary tuberculosis as an infective disease due to the absorption of a specific virus, and at once a new diagnostic feature came into being. In 1865 Villemin[8] actually demonstrated the infective nature of tubercle by a series of experiments on animals. In the meanwhile the tubercle had been demonstrated in the whole series of so-called strumous diseases, in the enlarged glands, in the scrofulous ulcer, in lupus, in caries of bone, and in the long familiar "white swelling." Finally, in 1882,[9] Koch published the account of his discovery of the tubercle bacillus. That organism was soon shown to be present in every recognised tuberculous and scrofulous affection, and here for the present the matter rests. In the fable the mountain was moved and a mouse came forth. The great mystery of the miliary tubercle had been shaken, and there issues the bacillus. Once more the student seems to have reached the limit of philosophical inquiry. As for scrofula, that once all-important disease fades, after multitudinous changes of fortune, into non-existence. As a definite disease it has no being, and the term is merely a ghostly relic of the past. Tuberculosis may now be defined as an infective disease in which the tissue changes are due to the action of a specific micro-organism, the tubercle bacillus. These tissue changes are, in their general characteristics, those of an inflammation of a low and usually chronic type. The use of the term "neoplasm" in association with tubercle appears to me to be fallacious and misleading. The inflammatory process concerned with tuberculosis is feeble and insidious—it is prone to extend locally; the troubled area is ill defined in its limits, and there is little tendency to produce a defensive barrier which will isolate the infected region. The products of the process are flimsy and unstable. Caseation is so far common as to be almost characteristic. Repair is uncertain and often insecure, and suppuration offers a quite frequent means of cure. Tuberculous affections respond readily to treatment when a free eradication of the diseased tissue is possible. The existence of extensive caseation has no little influence upon the details of surgical treatment. The process of caseation is one of necrosis and fatty degeneration. Caseous matter is not deposited in the usual pathological sense, and the term "caseous deposit" is misleading. Caseous matter is not inspissated pus, nor is it capable of any other than a merely chemical change. It cannot "break down into pus," as the common expression goes. The cheesy nodule is absolutely incapable of so active a process as pus formation. It is merely a mass of dead material, comparable to the sequestrum in necrosis of bone. Suppuration is often excited in the tissues around it, and the object of such suppuration is obviously to rid the body of the noxious mass. It is cast out as a foreign body is expelled, and its removal by surgical measures serves to restore peace to the disturbed district. The caseous material does not of necessity involve suppuration. It may become inspissated and leathery; it may undergo calcareous change; it may become encysted. As a general surgical proposition it may be said that it is as desirable to rid the body of a caseous mass as it is to remove from it a portion of necrosed bone, although the proposition, when the tuberculous lesion is concerned, is modified by many circumstances.

When one comes to consider the tuberculous individual it is essential to bear in mind that two things are needed to set in action the tuberculous process. There must be the seed and there must be a suitable soil. The seed is provided by the tubercle bacillus, and among the haunts of men this bacillus is, without doubt, liberally distributed. The more closely human beings are packed together the more common may the bacillus be expected to be. In spite of the very general diffusion of the bacterium in our midst, it is remarkable that tuberculosis, although a common affection enough, is by no means common to all men. Some individuals are more exposed to infection than others, but that does not explain the distribution of the disease. Were the seed alone the necessary thing, then all the nurses in hospitals for phthisis should become tuberculous, and from such institutions tuberculosis should spread as from a centre. Tuberculous disease, however, does not spread in this way, or only in a few very rare accidental instances, to which a little too much attention has been paid. It is evident that the soil is of much more importance than the seed—that there must be a large proportion of a population who are practically non-inoculable, while there is a proportion whose bodies form a suitable medium in which the bacillus can grow. The tuberculous individual is the one whose tissues form a suitable soil for the development of the bacillus. The non-tuberculosis individual is the one in whose tissues this micro-organism cannot obtain a hold, it being assumed that both are equally exposed to infection. Tuberculous disease may be acquired, but it cannot be inherited; that is to say, the parent cannot hand down to its offspring the tuberculous process in its complete condition, with its bacilli, its tubercles, and its caseating districts. What the parent can unfortunately transmit to its offspring is a body whose tissues form a suitable soil for the development of the bacillus, should that microbe ever reach it in sufficient strength. What is inherited, as a matter of fact, is not a

[2] "'King's Evill' is a tumour arising from a peculiar acidity of the serum of the blood which, when it lights upon glandule, muscle, or membrane, it coagulates and hardens"—Chirurgical Treatises, by Richard Wiseman. London, 1682.

[3] Opera Medica; Praxis Medica. Tract IV. Amsterdam, 1679.

[4] Richard Morton: Opera Medica. Geneva, 1727. Morgagni: De Sedibus et Causis Morborum. Lugduni, 1765.

[5] The Morbid Anatomy of the Human Body. London, 1793.

[6] Bayle: Remarques sur les Tubercules; Journal de Médecine, Chirurgie, Pharmacologie, &c., an xi., tome vi. Laennec: Traité de l'Auscultation médiate; Paris, 1819 and 1826.

[7] Zeitschrift für Rationelle Medicin, 1857.

[8] Gazette Hebdomadaire, serie ii., 50, 1865, and Etudes sur la Tuberculose, Paris, 1868.

[9] Berliner Klinische Wochenschrift, 1882, No. 15.

disease, but a predisposition. On the other hand, the state of body needed to form a suitable soil for the bacillus may be acquired. This is well seen in what is known as "penitentiary" or "workhouse" tuberculosis. A number of children find their way to these institutions. Their parents may have been entirely free from tuberculosis, although possibly not perfect in health in other respects. These children are often brought up under unhygienic conditions, with insufficient exercise, insufficient sunlight, insufficient air, and insufficient food. Types of the individual thus produced are to be met with in the sodden-looking, purple-faced, clownish children who are now and then seen shuffling their chilled limbs in the ranks of a charity school parade. A small proportion of these depressing creatures become tuberculous for no other reason than that their surroundings during the period of growth have been such as to render their tissues a favourable soil for the bacillus of tubercle.

It has been said by some writers that any condition of ill-health may render a patient disposed to tubercle; but this is not so. The distribution of tuberculosis is not identical with mere ill-health. In connexion with the matter of soil, a prominent place must be given to localising conditions, such as injury in bone and joint disease, and catarrh and ulceration in connexion with tuberculous troubles of the respiratory passages and the alimentary canal. With regard to the question of the transmission of the bacillus or the channels of infection in tuberculosis, convincing evidence on many points is still lacking in regard to the human subject. Experiments upon animals have amply demonstrated the transmission of tubercle: (1) by inoculation, (2) by respiration, (3) by cohabitation, and (4) by feeding. When the possibilities of such transmission in man are studied in the light of clinical experience it soon becomes evident that data derived from laboratory researches and experiments upon animals must be accepted with considerable modification if it be sought to apply them to the disease in man. The animal man, viewed as a corpus vile, does not respond very readily to the tuberculous virus when it is introduced into the body by an unintended experiment. The position, so far as it can be discussed upon clinical data only, may be considered under the four headings just alluded to.

1. *Transmission by inoculation.*—Considering the wide distribution of tuberculous disease, and the fact that in many forms of it a discharge exists in which tubercle bacilli are more or less numerous, it is remarkable how very rare are examples in man of inoculation with tuberculosis through the medium of the skin or mucous membrane. It is evident that to effect such inoculation the circumstances must in one way or another be most exceptional. The pathologist at a large hospital for phthisis must have his hands soaked for hours at a time with tuberculous pus. His knuckles cannot always be free from abrasions and scratches, and yet how very rarely does any development of tubercle occur at the undoubtedly inoculated spot. It is true that at least one form of "anatomists' tubercle" is really tuberculous, but the condition remains quite local and is readily cured. Examples of communication by inoculation are afforded by such cases as the following. A servant maid wounds her finger cleaning a spittoon used by a phthisical patient, and develops a tuberculous ulcer at the site of the wound and tuberculous glands in the axilla. A girl tattooed on the arm by her lover who was dying of phthisis develops lupus at the inoculated spot. Lupus of the pinna has followed the wearing of earrings belonging to a phthisical patient. Tuberculosis has been several times communicated by the Jewish method of circumcision.

(2) *By respiration and* (3) *by cohabitation.*—A certain number of instances have been recorded in which it is more or less apparent that tuberculosis in the form of phthisis was communicated to a sound individual. The examples have been mainly noticed in the persons of husbands and wives, or intimate friends, or nurses and patients. The cases, however, are quite uncommon, considering the wide prevalence of the disease. Jousset would place them as low as 2 per cent. This method of communicating tuberculosis is practically unknown in hospitals for phthisis. On the other hand, it has been made evident that tuberculosis is more common in crowded communities.

(4) *By feeding.*—This method of communicating tubercle is in the human subject exceedingly rare and is doubted by many. Jousset (writing in 1893) affirms that no case has been demonstrated. It would appear that the bacilli of tubercle cannot live in the healthy stomach, and cannot survive the heat involved in the cooking of meat. The communication of the disease to a child by means of milk from a tuberculous cow has not been established beyond doubt. Niepve gives the case of an infant born of healthy parents who was suckled by a tuberculous nurse who had bacilli in her milk; the child soon died of tuberculous meningitis. That tuberculosis, however, is very frequently developed through infection from the mouth is undoubted. This is seen in the common enlargement of the cervical glands in association with some such trifling lesions in the mouth as may afford a convenient entrance for the tubercle bacillus. The steps of the infection from the mucous membrane to the glands have been well demonstrated in cervical gland disease in pigs. On clinical grounds this channel of infection would appear to be very common in the human subject, although it does not prove that the infection is conveyed to the mouth by actual articles of diet, such as milk from a tuberculous cow. It may here be mentioned that it would appear that the tonsils and the circle of adenoid tissue at the commencement of the pharynx form a kind of protective ring to the entrances to the larynx and pharynx. "The mass of adenoid tissue," writes Dr. Sims Woodhead,[10] "whatever its situation, if the cells are active, is a means of protection in so far as it consists of an enormous number of active cells which are capable of taking up large numbers of micro-organisms. ..... So long as these tonsils remain healthy, or so long as they are attacked by no extraordinary number of pathogenic micro-organisms, they are capable of resisting attacks and of dealing with micro-organisms, even of what would be called a most virulent type. ..... In many cases the tonsil itself bears evidence of being effected by tuberculous disease. It is evident that under certain conditions the very structures which ordinarily offer resistance to the general invasion of the bacillus may be so disorganised that they are no longer capable of dealing effectively with the organisms by which they are attacked." Dr. Woodhead proceeds to point out how the cervical glands become infected from these diseased tonsils.

These observations are worthy of being considered. I am frequently told by patients that they have been assured that the tonsils are quite useless organs and that any child is better without them. This statement is generally placed among the arguments advanced for the removal of the body in question. It is impossible to too strongly urge the immediate removal of actually diseased tonsils in unhealthy children, and the eradication of the pharyngeal tissue when it reaches the condition known as "post-nasal growths." At the same time, the wholesale removal of all tonsils which are just large enough to be evident as projections would probably sacrifice not a few masses of adenoid tissue which are still active and still capable of protecting the body from the invasion of noxious germs.

We now come to consider the general treatment of tuberculosis from a surgical standpoint. The first elements in the treatment are plenty of air, plenty of sunshine, and plenty of good food. Let the patient escape from the crowded city and live in the country; let him sleep with his bedroom windows open winter and summer. So long as mere movement will not be in itself injurious, let him be moved into the open air. Let him strive to live in the open air. The atmosphere should be dry. Patients do not do well in densely wooded districts, in valleys by the banks of large rivers, and in moist places. They do better by the sea, in districts with a low rainfall, with a porous soil, with spare vegetation, and with an unimpeded rush of air from the sea. Sunshine and dry air are deadly to the bacillus, and light and oxygen are of more value than all drugs. In the open air the tuberculous patient may feel safe. In England there is some difficulty in spending much time in the open air in the winter, although I have had patients with high temperatures and suppurating wounds, with acute joint mischief and psoas abscesses out of doors every day in the winter in spite of snow and frost and rain. The good results that I have seen to follow the operative treatment of spinal abscess have been due in no small degree to the fact that many of my patients after operation were able to be taken out of doors on a spinal carriage every day and all day through the whole of an English winter.[11] The great feature of Thomas's splints lies in the fact that they permit the patient to move out of the house. If the patient can winter in a more suitable climate than England, let him go to a place where the

[10] THE LANCET, Oct. 27th, 1894, p. 968.
[11] THE LANCET, May 21st, 1892.

air is dry and the sun bright, and where he can be out of doors all day. Thus it happens that surgical forms of tuberculosis do as well at St. Moritz and in Canada as at Cairo and California. These are places with this at least in common: there are facilities and inducements to be out of doors in the winter months.

There are no drugs which are specifics against tubercle, and three-fourths of the medicines given are administered, not to treat the disease, but to soothe that inherited craving in the human race for physic, which is almost as uncontrollable as the craving for drink. Tuberculous subjects, especially children, appear to be benefited by taking an extra amount of fatty matter in their food during the cold weather. This can be supplied in the form of fat, butter, or cream. There is no excuse, so far as I am aware, for the administration of cod-liver oil. In all probability there is no more nauseous form of fat to be found, and I am not aware that it contains any chemical quality other than that of oil. Its use dates from a time when it was considered in keeping with the fitness of things that all medicines should be nasty. If adults like this oil, by all means let them take it; but it is unkind to force it upon children, who have no prejudices as to the efficacy of medicine, and have not reached an age to appreciate the beauty of nastiness. The public, moreover, cling to the belief that there are such medicines as "tonics." Tonics are medicines which give the taker strength. It is needless to say that there are no medicines which can effect this. Strength cannot be poured down the œsophagus. One might as well add to the Pharmacopœia a physic the taking of which will give wealth. Iron may be needed when there is anæmia, and is conveniently given to children in the form of Flitwick water. Arsenic and quinine are now and then of value, and in some few instances iodide of potassium is of service. Iodine is constantly employed in the form of Kreuznach water, and the special treatment carried out at Kreuznach is often of decided benefit in the early stages of gland disease.

With regard to the local or surgical treatment of tuberculous affections, it is interesting to note the changes which have taken place, and which are still taking place, in connexion with this department of practice. The time is not very far distant when tuberculous or scrofulous troubles were considered to be unsuited for surgical treatment. They were regarded as "constitutional" disorders, and as such were presumed to belong to the province of the physician. The surgeon applied splints, blisters, and iodine, and occasionally opened an abscess and removed a long-dead fragment of bone, but the responsibility of serious treatment rested with the man of medicine. Then came the great surgical revival, and tuberculous affections were attacked in common with nearly all other disorders which presented any local manifestations. There is no doubt but that in a while the pendulum swung too far in the opposite direction. From the position of not treating tuberculous affections at all, it proved to be a short step to the position of treating them too much. Now, I think, the mean is being arrived at, and the surgical treatment of tuberculous affections is becoming free of extremes. This is strikingly illustrated in connexion with the care of tuberculous joints, such as the hip and knee. The first care is to place the patient under what the student in his examination paper delights to call "favourable hygienic conditions." I am quite aware that among poor patients this is not always possible. Then the joint is placed scientifically at rest. The thigh—if the disease lie at the hip—is not abruptly forced into a stereotyped position which the surgeon declares to be one of rest, but which in reality is one of discomfort and one in which the tension within the joint is increased. The limb, on the contrary, is gently induced into the natural position and kept there. Under the treatment by perfect rest, in as nearly as possible perfect conditions, the majority of cases of tuberculous joint disease get well. By so much as the surroundings are imperfect, by so much is that majority reduced. If an abscess form in connexion with the hip, and if that abscess be treated upon general surgical principles, again it may be said that the majority get well. As an evidence of this, must be cited joint disease among the better classes. This is a very different story from the one told but a few years ago. It was assumed that the majority of cases of joint disease went from bad to worse. There was some truth in the assumption, and amputations were common. Excisions, mainly of the knee, were commoner. Mr. Holmes, writing in 1880, gives the results of 245 cases of excision of the knee performed in certain hospitals in London during five years. It would be interesting to know how many excisions of the knee for active tuberculous disease are performed in London per annum at the present time. A distinguished surgeon, writing in 1892, states that "when a well-marked case of pulpy disease has lasted over six months it is not worth while, in the interests of the patient, to attempt the conservation of the joint for a longer period." This was written in connexion with excision of the knee. There was a time, not so many years ago, when, in the opinion of some surgeons, excision of the hip or knee should be performed as soon as the diagnosis of tuberculous disease was established. Even by this time so-called "primary excisions" are more or less matters of the past. It was furthermore urged in connexion with hip-joint disease that as soon as an abscess appeared an excision should be carried out. It would, I think, be safe to predict that that verdict will not be confirmed in the immediate future. The excellent operation of arthrectomy, for the elaboration of which surgery is largely indebted to Mr. Wright of Manchester, is becoming wisely restricted in its use. Instead of being more frequently employed it is less frequently employed, and it has become quite manifest that it is not adapted as a routine treatment for even one particular phase of joint disease. Mr. Howard Marsh, in his recent work on "Diseases of the Joints," gives an excellent review of the present position of surgical feeling upon this subject, and in contrast to the literature of the time when excision (or, later on, arthrectomy) was almost a routine measure, his account shows a singular change in surgical practice.

In the treatment of tuberculous gland disease there was a great leap from doing nothing to doing possibly to much. The treatment of tuberculous glands of a certain grade by complete excision is in every way most excellent, and has been attended with the best results. But here, again, there is evidence that is is possible in adopting a new measure of treatment to run into extremes. It has been assumed by not a few that the only treatment of tuberculous glands is by excision, and I have heard the claim advanced that as soon as it is evident that a gland is tuberculous it must be removed. Those who urge this claim assert that there is no other course open and that disaster will follow if an operation be not at once performed. This pressing of an admirable measure to an extreme and irrational use is tending to bring a most useful operation into discredit. It may be safely asserted that certain cases of tuberculous gland disease recover, and recover well, without operation; and, also, that there are instances of gland trouble, especially when extensive and in adults, which are not suited for operation. In the treatment of gland disease two matters call for early attention. In the first place, it is essential that the periphery be examined and any exciting cause be dealt with as a primary feature in the treatment. There may be discovered some eczema of the scalp, or some discharge from the ear, or some nasal catarrh. In many instances there are enlarged tonsils, or post-nasal growths, or some ulceration within the mouth, or some wholly carious teeth. It is of little avail to attempt to treat tuberculous glands when the tonsil from which they have been infected is left untouched. I can recall the case of a young patient with enlarged cervical glands, who had been sent to certain well-esteemed health resorts without benefit, and who was finally advised to have the glands removed as the only measure of cure possible. The glands depended upon a tuberculous ulceration of the tongue, and when the tongue was treated and healed the glands subsided and ceased to give trouble. Many like cases may be quoted. As a second element in the treatment the part must be kept at rest. This is generally insisted upon when the enlarged glands occupy the axilla or the groin, but it is seldom urged when the trouble is in the neck. Yet the neck is in almost constant movement, and when the glands are beneath the sterno-mastoid muscle they are subjected to continual disturbance. Until the neck is fixed the great essential in the treatment of inflamed parts is ignored. In very many cases there is no measure for the diseased glands but removal, but this measure is likely to fall into disrepute if it become an article of faith—as it is with some—that the only treatment of a tuberculous gland is by immediate operation. It is sometimes promised to the patient that the scar left by the operation upon the glands will be quite insignificant, and, indeed, a mere white line, which will compare in a startling manner with the hideous scars left by "nature." Surgeons, on the other hand, who have seen much of the operations, will not be disposed to lay too much stress upon the invariable fineness and invisibility of the cicatrix left by art.

When we turn to the treatment of tuberculous testis, it will be found that the fashions in treatment have followed some such lines as the following: In the early days the trouble was condemned as "constitutional," and left alone. Later the testicle was removed when it and the scrotum were hopelessly disorganised; it was evident that these operations were done too late. And then came the advice that the whole organ should be excised as soon as suppuration made itself evident; many of these operations were certainly too early. Now, perhaps, something like the right mean has been arrived at. The patient is placed under as favourable conditions as are possible, and the moment any point of softening appears in the epididymis, it is well opened up, well scraped, and well plugged with iodoform gauze. The operation may have to be repeated more than once. What is the result of this measure? In common with many other surgeons, I can cite an encouraging series of cases in which this simple plan of treatment has led to a complete cure, with loss of substance no doubt, but without loss of the essential part of the organ. It is, however, in connexion with the treatment of spinal and other tuberculous abscesses that the contrast between the treatment of the past and the present is the most striking in its results.

Not many years ago a psoas abscess was rightly considered to be a very fatal thing. The abscess usually presented below Poupart's ligament, and was allowed to break or was opened in a faint-hearted manner. Then followed the disastrous train of results due to inadequate evacuation of the morbid products, inadequate drainage, want of suitable rest to the parts, and the inevitable introduction of sepsis. The majority of the patients died, and among adults especially the results were most deplorable. At the present time the position of affairs is much altered. The actual steps of the operative treatment differ a little with different surgeons. The proceeding I have adopted myself is the following. The abscess is reached through the loin by the route I ventured to advocate in a paper read before the Royal Medical and Chirurgical Society in January, 1884. By this incision the abscess is opened as near as possible to the seat of disease. The spine, over a limited area, can be examined, and now and then diseased bone can be removed. The largest sequestrum I ever removed involved the greater part of the body of the first lumbar vertebra. Cases associated with such large sequestra are, however, quite rare. Now and then a surface of carious bone can be scraped. When the abscess has been evacuated suitable sharp spoons are introduced, and the lining wall of the cavity is carefully and thoroughly scraped until the whole surface has been laid bare. During the process the cavity is repeatedly flushed out with warm sterilised water, which, at the London Hospital, comes direct from a Berkfeld filter. Septa are broken down with the fingers and diverticula opened up. The amount of pus, cheesy matter, and membrane removed is often surprising. When the cavity is clean it is well dried with Turkey sponges on holders, which serves to remove what remains of débris. Finally, a little iodoform emulsion is introduced and the wound then closed. In spite of the contradictory evidence furnished by laboratory experiments, it certainly does appear, from clinical observation, that iodoform has a specific effect upon tuberculous lesions. The well-to-do patient passes his convalescence on a spinal carriage in the open air, be it winter or summer. The cavity left by the operation is more like that left by the removal of a very large tumour, such as a lipoma. It does not behave as does the wall of an ordinary septic abscess, and the healing is very usually immediate and complete. This peculiarity in the inflammatory phenomena with which tuberculosis is associated is well illustrated by the manner in which tuberculous peritonitis responds to operative treatment. In a series of 308 cases of tuberculous peritonitis treated by laparotomy there were 74 deaths, the mortality due directly to the operation being only 2·5 per cent. Those cases did best in which the operation consisted of little more than a free incision, and in which there was neither flushing of the abdominal cavity nor drainage. I think it may be said that in no non-tuberculous inflammatory condition is a parallel to this to be met with.

Such, in very brief and imperfect outline, are some of the changes which have in recent years concerned the relation of the surgeon to tuberculous disease. These changes have taken place along leisurely lines, and have been so far free from abrupt and startling departures that it is only when they are passed in review that the magnitude of their meaning is made evident. I think it may be affirmed that the lead in this department of progress has been taken by the surgeons of this country, and that this progress has been marked by that discriminating common-sense which has always been conspicuous in British surgery.

Wimpole-street, W.

ON THE VARIATIONS IN THE TEMPERATURE OF THE MOUTH IN HEALTH PRODUCED BY LOCAL APPLICATION OF HEAT AND COLD.

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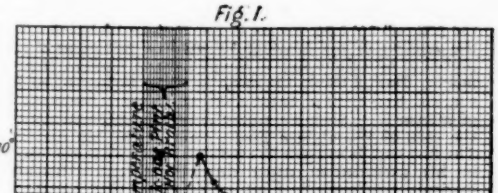
BY reason of accessibility and a belief that the true body temperature is thereby more nearly obtained it has become very usual to take the temperature of patients by placing the clinical thermometer in the mouth, while at the same time the patient is directed to keep the bulb under his tongue and his lips firmly closed around the stem of the instrument. This site has largely taken the place of the axilla, particularly in the case of patients who are fully dressed. The following simple experiment, however, will show that considerable care must be exercised before concluding that the mouth temperature is an indicator of the body temperature—if, indeed, it be not entirely deceptive. If an ordinary healthy person take the mouth temperature and then drink some moderately hot fluid, such as a cup of tea, and on finishing it again take his temperature in the same situation, he will find that the thermometer now registers one or two degrees more than it did at first. The importance of this fact, which can easily be verified, led to my undertaking certain experiments upon the subject with a view to determining the conditions under which the temperature in the mouth varies. An adult male perfectly healthy, but confined to bed by a small surgical ailment, was made the chief subject of the experiments. His temperature was normal, and the experiments were for the most part made about 2 P.M. It is unnecessary to give more than one example in each class of experiment, by reason of the uniformity of the results.

1. *The effect of heat locally applied by means of hot drinks* — Below is given a typical temperature curve (Fig. 1) where the subject of the experiment took one pint of beef-tea the temperature of which varied between 150° F. and 110° during the time of its consumption. It will be noticed that (*a*) the

Fig. 1.



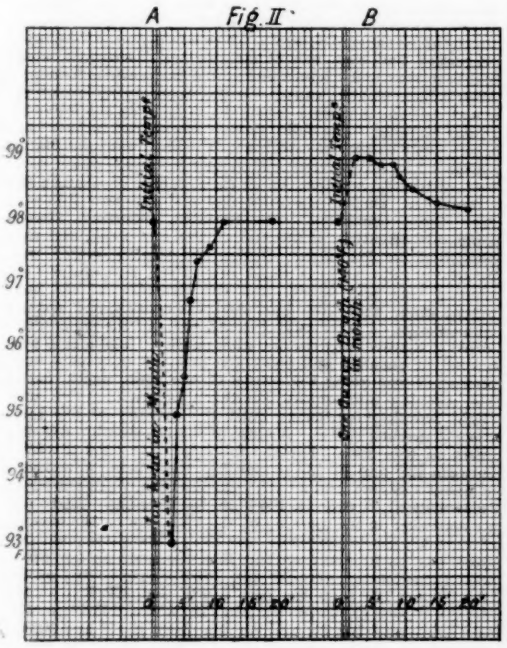
To show the effect of hot fluid upon the temperature of the mouth.

highest point of the rise occurs immediately after the fluid has been taken and that the temperature falls somewhat rapidly at first, but more slowly afterwards; and (*b*) the temperature in the mouth is still raised 0·4° forty minutes after the fluid has completely left the mouth.

2. *A comparison between the effects of heat and cold.*—The effect of cold applied by means of fluid at 50° was separately examined, but it will conduce to brevity if that set of

experiments be merged in the present class. The difference between them is merely one of degree. In order more accurately to compare the effects of heat and cold the period during which either was allowed to act upon the mouth was fixed at one minute. For a reason which will immediately appear the action of cold was invariably investigated before that of heat. The method of experiment was as follows. The temperature in the mouth was first taken with great care. A piece of ice of sufficient size to ensure that some was unmelted at the end of the allotted time was then kept in the mouth for one minute; the temperatures obtained from time to time afterwards were compared with the initial temperature. After the mouth temperature had again reached the initial temperature and had remained constant for a quarter of an hour, half an ounce of broth at 140° was held in the mouth, also for one minute, and the temperatures were registered as before. Below is a typical curve of such a double experiment. (Fig. 2.) It must be

Fig. II.

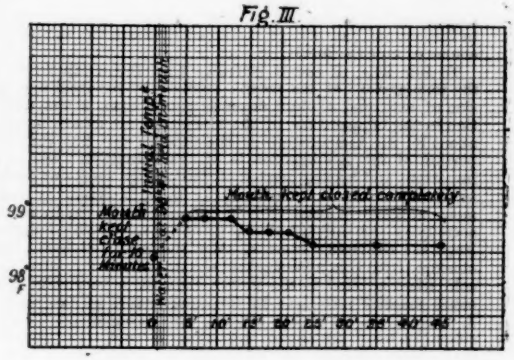


To show the effects of holding (A) ice and (B) fluid at 140° F. in the mouth, each for one minute. Note.—B was not commenced till a quarter of an hour after the temperature change brought about in A had become readjusted.

borne in mind that the difference from the body temperature in the two experiments A and B was not the same, being 66° (98°–32°) in the case of the ice, and but 42° (140°–98°) in the case of the broth. In accordance with the greater temperature difference in the case of the ice the initial fall of the mouth temperature is greater, but, contrary to all expectation, the recovery is much more rapid than in the case of the hot fluid. Thus, in the example given above, the return to normal in the case of ice was complete in ten minutes, whereas with the hot fluid the rise, though less marked, was more prolonged, so that at the end of ten minutes the temperature of the mouth was still half a degree higher than it was before the broth was taken, while it was still above the initial temperature at the end of twenty minutes. The more rapid recovery of the mouth temperature from cold in such experiments as the above has been found to be invariable. The effect of cold, however, is not only shown when cold liquids or solids are taken, but it is also shown when cold air is inspired through the mouth. Thus, when a healthy person with an initial temperature of 97·6° (taken with the mouth closed for ten minutes) breathed through the open mouth air at 30° for forty-five seconds, drawing during that time twenty full breaths, his mouth temperature was, three minutes later, 96·8° (a fall of 0·8°), while it did not again reach the initial height until he had kept the mouth shut for a further seven minutes, making the whole duration of the effect of the cold air ten minutes.[1] It must be remembered, too, in this case that the effect of the cold air upon the mouth in inspiration is partially neutralised by the air at the body temperature which passes over the same parts in expiration. This point is of some importance, since it must be an almost constant source of error, as the temperature of the air respired by any person must vary between very wide limits unless he be definitely confined to a room which is kept at a constant temperature. The extreme variability of the mouth temperature, however, can be shown by even smaller temperature changes than those given above, for I have found that the mere act of reading aloud in an ordinary manner for one minute is sufficient to reduce the mouth temperature 0·3°, while the effect is not completely recovered from until the mouth has been kept closed during the five minutes which elapse after the reading aloud has ceased. The mere act, therefore, of describing his symptoms to the physician lowers appreciably a patient's mouth temperature.

3. *The effect of liquid at the same temperature as the initial temperature of the mouth.*—If the mouth temperature be taken with care, and water heated to the same temperature be held in the mouth for two minutes, the temperature of the mouth rises to a perceptible degree. By reason of the unexpectedness of this result the experiment was repeated many times on different subjects, but always with the same result. In some of the later experiments, since it was possible that even with great care the liquid might have a slightly higher temperature than the mouth, it was not taken into the mouth until it was definitely (half a degree) *below* that of the mouth. This modification, however, did not cause any alteration in the final result. Below is given a typical temperature curve of such an experiment. It will be noticed

Fig. III.



To show the effect on the temperature of the mouth of the local application for two minutes of water heated to that temperature.

that by these means a rise of 0·6° is brought about, a rise quite outside the possibility of experimental error. The effect, moreover, is of long duration, since the temperature of the mouth was still raised perceptibly (0·2°) three-quarters of an hour after the water had been swallowed.

The facts, then, being such as have been described, their explanation becomes a matter of interest. That the explanation which first suggests itself—namely, that the modifications depend simply upon a transference of heat from the material with the higher temperature to that with the lower, with the object of equalising the temperatures of both—is not a fully satisfactory one is shown by the experiments of which Fig. 3 is an example. According to this view, since heat was neither added to nor abstracted from the mouth with the liquid, the mouth temperature should remain constant; that it does not so remain constant indicates that

[1] Throughout the whole investigation a "one minute" clinical thermometer was used, and three minutes' duration in the mouth was taken to ensure an accurate reading. The *initial* temperature was obtained invariably by keeping the thermometer in the mouth for ten minutes. For temperatures below 95° a non-registering thermometer was used, but was replaced by the clinical thermometer so soon as the temperature reached 95°.

the process is more complicated. Nevertheless, the fact that the rise of the temperature of the mouth varies within limits according to the temperature of the fluid held in the mouth indicates that this explanation probably holds good in part. I would suggest that that portion of the rise or fall (as the case may be) which obtains immediately after the action of the heat or cold has ceased, and which is rapidly obliterated, should be regarded as in part depending upon an actual physical heating or cooling of the actual tissues of the mouth, and particularly the epithelium. Nevertheless, this accounts for a small portion only of the change and leaves entirely unexplained the experiments shown in Fig. 3. Now the simplest way in which these experiments can be explained is by regarding the presence of the water as a stimulus which inhibits the vaso-constrictors of the vessels of the mouth and therefore allows the parts to be flushed with a more rapid stream of blood which has come with less delay and in larger quantities from the deeper parts, and which is, therefore, of a higher temperature than that of the surface. That this is true is suggested by the facts (*a*) that the mouth temperature cannot be indefinitely raised by raising the temperature of the ingested fluids, (*b*) that the temperature change is brought about by a very short application of the stimulus, and (*c*) that it lasts a length of time quite out of proportion to the duration of the stimulus. Since the ingestion of food is accompanied by increased action of the salivary glands it seems reasonable to suppose that the increased temperature of the mouth may be bound up with the arterial congestion which is known to accompany increased salivary secretion. Nevertheless, I have not found that such fluids as clove-water, which markedly increase the secretion of saliva, cause the temperature of the mouth to be raised to any greater extent than does distilled water (at the same temperature), by which the salivary secretion is increased to a much smaller extent. That the modified temperature is not due to a modification of the temperature of the whole blood is obvious—firstly, because such a result is impossible for purely calorimetric reasons, and, secondly, because the temperature in the rectum has always remained constant throughout the course of an experiment.

To sum up. It seems probable that the modification in the temperature of the mouth induced by the local application of heat and of cold depends partly upon the modification in the temperature of the tissues of the mouth brought about by the temperature of the fluid in use, but that this portion of the modification is of short duration; the more important and lasting portion of the change seems to be due to variations in the blood-supply brought about by vaso-motor action. Whether this be connected with the increased activity of the salivary glands or not is at present doubtful. From the clinician's point of view the most important conclusions from this investigation are as follows: 1. Heat and cold when applied to the mouth even for a very short time cause marked variations in the temperature of the mouth. 2. The effect of heat, though less pronounced, is considerably more prolonged than that of cold. In practice, if a great degree of accuracy be required, I would suggest that the temperature should never be taken in the mouth unless other parts are inaccessible; but, if only the mouth be available, then attention should be paid to the following points: (*a*) one hour at least must have elapsed since the last food or drink of any kind, and even in the smallest quantity, has been taken by the patient; and (*b*) for ten minutes previously to inserting the clinical thermometer the mouth must have been kept completely closed. Under such circumstances as these, and under them alone, is a temperature taken in the mouth a reliable index to the body temperature.

Pathological Laboratory, Cambridge.

PATHOLOGICAL SOCIETY OF MANCHESTER.—The annual meeting of this society was held at the Owens College Medical School on Oct. 9th, Professor Sheridan Delépine, President, being in the chair, and the following officers were elected for the session 1895–96:—President: H. R. Hutton, M.B. Vice-Presidents: T. Harris, M.D., and W. Thorburn, F.R.C.S. Treasurer: T. N. Kelynack, M.D. Secretary: R. B. Wild, M.D. Committee: A. Brown, M.D., T. A. Goodfellow, M.D., A. T. Helme, M.D., E. T. Milner, M.B., E. S. Reynolds, M.D., W. P. Stocks, F.R.C.S., A. T. Wilkinson, M.D., and J. B. Wolstenholme, F.R.C.V.S. Auditors: D. Headridge, L.D.S., and J. W. Smith, F.R.C.S.

TWO CASES OF INFECTIVE FEVER SHOWING THE THERAPEUTIC VALUE OF INTESTINAL ANTISEPSIS.

BY LEONARD WILLIAMS, M.B., C.M. GLASG.,
HONORARY MEDICAL OFFICER, SIDMOUTH COTTAGE HOSPITAL.

THE treatment of infective fevers, and of typhoid fever especially, by internal antiseptics has recently been widely advocated. As a contribution to the subject I desire to record two cases—one of an obscure infective fever which I believe to have been typhoid fever, and the other a case of undoubted typhoid fever—both of which were treated by measures calculated to promote intestinal antisepsis.

CASE 1.—I visited a patient on Tuesday, Feb. 5th, 1895, who was threatening to miscarry at the seventh month. She had already borne six children, and there had been nothing noteworthy about the confinements. The whole period of the present pregnancy had been one of malaise and discomfort, which had been very much intensified during the previous fortnight. After a little trouble, caused by the necessity for rectifying a malposition, a normal labour took place on the following Friday morning. The child, though ascertained to have been alive shortly before, was stillborn. The birth was immediately succeeded by a brisk rigor and violent dyspnœa, which, however, gradually subsided under the influence of warmth and stimulants. During the same day and the two following days these conditions were repeated, recurring, after a temporary cessation, at the end of the first week, and then persisting for five days. During the attacks, which were invariably followed by a rapid rise in the temperature, the shaking was very violent and the dyspnœa of the most urgent kind, with blue lips, cold extremities, and anxious countenance. A most careful examination of the præcordium failed to discover any cardiac abnormality. The lochia were normal in quantity and character, and the only pain complained of was along the course of the right sciatic nerve. The evening temperature showed a progressive rise with slight morning remissions until the evening of the 11th, when it reached 103° F. A chart of the temperature was first made on this date. For the following five days it varied between 102° and 99° in the morning, there being a remission of about a degree and a half. On the 16th, when the rigors recommenced, it rose to 104·4° in the evening. There was no remission on the morning of the 17th, and on the evening of that day the temperature was 105°. The subsequent progress was as follows: on the 18th the morning and afternoon temperatures were 99° and 104·6° respectively; on the 19th 99° and 103°; on the 20th 101·6° and 102·6°; on the 21st 101·6° and 102·4°; on the 22nd 101·4° and 102·4°; on the 23rd 100·4° and 102·2°; and on the 24th 100·2° and 102·0°. After this there was a progressive fall until March 1st, when the temperature was normal. The evening temperatures then began gradually to ascend, with decided morning remissions, until the 6th, when 103·6° was once more registered. The temperature, however, very soon fell again, and the case proceeded to a satisfactory issue. I have given the history of the temperature by itself to avoid needless repetition. At the commencement of the disease the cause of the obviously grave state of matters was a source of the greatest anxiety and perplexity. There was at no time any local or other condition tending to give colour to the idea of puerperal septicæmia which was constantly present. The lochia remained normal, and there was no tenderness over the uterus. The diet during the first week consisted of meat broths and jellies, egg-and-milk, and some alcohol. On Feb. 17th I had an opportunity of observing the effect of a meal consisting of some chicken jelly, a little toast, and half an ounce of champagne. It was taken with relish, but was immediately succeeded by flushing of the face and a feeling of discomfort which was shortly followed by a rigor. I therefore concluded that the cause of the rigors was somewhere in the intestinal tract. The food was changed to peptonised milk, with prepared food occasionally. The bowels, which had throughout been confined, had so far been regulated by cascara palatinoids. For these an enema every second day was now substituted. On the 19th Dr. Bankart of Exeter saw the patient with me. He agreed that the diagnosis was very obscure, and had no alteration to suggest in the measures which were being taken beyond a proposal that some general antiseptic

should be administered by the mouth, in addition to bismuth, which was being given. I accordingly prescribed carbolic acid in pill form (two and a half grains three times daily). Constipation had all along been a very troublesome factor. The effect of the enemata was sometimes satisfactory, but very often not so. The motions were scybalous and blackened by the bismuth. On the 21st the patient was put upon barley water and milk exclusively and the bismuth was suspended, the carbolic acid pills being continued. As these appeared to produce unpleasant symptoms they were on the 24th also suspended, and thymol in pill form (two grains every three hours) substituted. The brief account of the temperature shows that from this time the patient's condition rapidly improved until March 3rd, when there was an acute recrudescence of the fever. I then determined to prescribe calomel. This was given in doses of two grains on two successive evenings (March 7th and 8th) with the best results, after which the patient made a good though protracted recovery. This rapid survey gives but a slight idea of the difficulties and anxieties of the case. Neuralgia, especially of the fifth and sciatic nerves, was the source of great trouble to the patient. The right parotid gland was swollen and indurated. There were several small oval ulcers on the uvula and back of the pharynx, which caused pain and difficulty in swallowing. Flatulence, abdominal pains and tenderness were very pronounced in the third week. The diagnosis of typhoid fever was not made until Feb. 22nd. The occurrence of the labour, the constant rigors, and the absence of any definite abdominal symptoms all tended to obscure the issue. What is particularly worthy of notice is the marked improvement in the temperature which ensued upon the exhibition, first, of the carbolic acid on the 20th, and, secondly, to a much greater degree, of the thymol on the 24th. The beneficial effects of the calomel administered on March 7th and 8th were probably due chiefly to its antiseptic properties.

CASE 2.—A young man aged nineteen years was taken ill on April 12th. I saw him on the following day and found a temperature of 104·4°F. The tongue was thickly furred, and there had been considerable epistaxis. There was pain in the head and in the right iliac fossa, slight pressure in which elicited gurgling. The general condition was such as to make it evident that the patient would have a very severe attack. He was at once put upon a rigid milk diet, with some alcohol, and was given the quinine and chlorine mixture recommended by Dr. Burney Yeo.[1] For the next four days the patient did not improve, but developed the usual evidences of the typhoid state. The tongue became dry and sordes appeared on the lips and teeth. The abdomen became tense and swollen. He lay on his back with his knees drawn up and tended to slip down in the bed, and his intellect became clouded. The afternoon temperature remained at 104°. On the 18th my friend Dr. Macindoe saw the patient with me. The temperature had fallen to 103·4°, but from his general condition we agreed that the prognosis was of the gravest. No alteration was made in the treatment, a careful pursuance of which we were agreeably surprised to find was soon followed by marked improvement. His afternoon temperatures for the next three days showed a steady decline; they were on the 19th 102·2°, on the 20th 100·6°, and on the 21st 98°. The fall in the temperature was accompanied by a corresponding improvement in the other symptoms, and he made a quick and uninterrupted recovery. I thought at first that there had been some mistake and that the patient was beginning the third week of the disease when I first saw him. This view was very strongly insisted upon by my friend when informed of the progress of the case. All the evidence, however, is against this supposition. The patient himself declares that, except for a slight cold, he was perfectly well until April 12th, and that on the 10th he was playing cricket with enjoyment. During the course of the fever the bowels acted freely, but there was no diarrhœa. The first motion which I saw was characteristic in appearance and odour. In all those shown to me subsequently the fetor was greatly reduced, and towards the end of the attack there was a distinct odour of chlorine in the evacuations. The illness began with every appearance of a very severe attack and the probability of a rapidly fatal issue. There was very little in the patient's favour. He was a delicate lad, the house he was in was insanitary, and he was without a skilled nurse. Yet so early as the end of the first week the case was in the highest degree hopeful, and it progressed with amazing rapidity to a satisfactory issue. This I can only attribute to the line of treatment adopted, and I have no hesitation in saying that, but for my good fortune in reading Dr. Burney Yeo's book, this lad would probably have lost his life.

The solution recommended by Dr. Burney Yeo he directs to be made as follows: "Into a twelve-ounce bottle put thirty grains of potassic chlorate, and pour on this sixty minims of strong HCl. A greenish-yellow gas is at once liberated. Close the bottle with a cork and agitate the mixture gently until the bottle is filled with gas; then pour water into the bottle little by little, closing the bottle and shaking well at each addition, until the bottle is half filled. Add to this mixture from twenty-four to thirty-six grains of quinine, and then fill the bottle with water. The dose is an ounce, administered, according to the severity of the case, every hour to every four hours." The "predominant partner" in the mixture, it seems to me, is the chlorine. It has long been used as a powerful antiseptic, especially as a wash for ulcers; but its special application to typhoid fever is a recent introduction of quite unusual promise. The foregoing cases, both of them severe, were successfully treated by means of intestinal antiseptics. The drugs used differed in the two cases, having, nevertheless, two properties in common. One of these—the germicidal—has already been referred to; the other is the property of volatility, to which I am inclined to attribute much of their efficacy, and I should, in selecting a drug for producing intestinal antisepsis, invariably give the preference to one possessed of this quality. That Case 2 was aborted by the administration of the chlorine mixture I have not the shadow of a doubt, nor have I any hesitation in saying that, but for the exhibition of some antiseptic such as thymol, the patient in Case 1 would not have recovered. The other lines of treatment which were open to me in conducting these cases were the expectant method and the cold bath treatment. The first, necessary as it frequently is in many obscure cases, is obviously a confession either of ignorance or impotence. The cold bath treatment, though it has had many eminent advocates, is one which has failed to find general acceptance. This has been partly due to the fact that it is cumbersome to the point of being dangerous, and largely to the fact that it is unscientific, in that it is a weapon directed against one symptom only, leaving altogether out of account the causation and essential lesions of the disease. The antiseptic method, on the other hand, presents a rational system of treatment directed towards counteracting or minimising the effects of specific morbid activities; it is easy of administration even in the humblest homes and is absolutely free from danger. Those who have had any experience of it will heartily concur with Dr. Burney Yeo when he says that "the practitioner who, in the face of the evidence which has recently been accumulated, neglects to promote intestinal antisepsis in typhoid incurs a very grave responsibility."

Sidmouth.

[1] Manual of Medical Treatment. Fourth edition, vol. ii., p. 635.

TROPICAL ABSCESS, RARELY A PRIMARY, USUALLY A SECONDARY, AFFECTION OF THE LIVER.

BY NEIL MACLEOD, M.D. EDIN.

EVERY physician who has had experience of tropical liver abscesses would say that their association with affections of the large bowel is only an occasional one, on clinical grounds alone. Unanimity of opinion on this point ceases if the results of post-mortem examinations are taken into account. Probably a large majority of observers in India hold the opinion of Murchison, which as lately as last year is set forth by Sir Joseph Fayrer in the work "Hygiene and Diseases of Warm Climates," and supported in the same volume by Professor Cayley of Netley—the opinion, namely, that these abscesses are usually the result of a primary suppurative hepatitis. Their origin as secondary to affections of the large gut, enunciated by Budd, Moxon, Martin, and others, is favoured by a minority of observers—a minority lately on the increase. This is a question which cannot be decided by general impressions, but by appeal to recorded cases. If they are usually the result of

a primary liver disease, an examination of recorded cases ought to furnish at least a fair proportion in which no lesion was found in the large gut. If, on the other hand, they are rarely primary and usually secondary to a lesion of the intestine, a majority of recorded cases ought to present traces of these intestinal lesions. The following cases ought obviously to be rejected as throwing no light on this question: (*a*) all cases of abscess that have recovered and in which there is no history of bowel affection stated or implied, since post-mortem examination of fatal cases frequently demonstrates the presence of ulcers in the large gut even where dysentery or diarrhœa is stated not to have been present during life; (*b*) for the same reason all fatal cases with a similar negative history not examined after death; and (*c*) fatal cases examined after death, but where no statement is made of the condition of the large bowel—here obviously it cannot be assumed that intestinal lesions were either absent or present. Disregard of these considerations and too close reliance on the clinical aspect of these cases have no doubt led astray many of those who have had to deal with this disease in the East. Commencing my acquaintance with so-called "tropical" liver abscess in the prevailing belief that it was only occasionally associated with the dysenteric lesion, my attention was first pointedly directed fifteen years ago to the question when a case of multiple abscess presented itself not associated with a history of dysentery, but in which cicatrices were found in the large gut after death. Repetition of this experience also with single abscesses, cicatrices or ulcers being found, naturally led me to look with suspicion on recorded statements of the absence of dysenteric history. An experience of about forty cases, every one of which, with one exception, was associated with history of post-mortem signs of dysentery, surely justifies the opinion that the relationship is not one of coincidence merely. The exception recovered. Sir Joseph Fayrer distinguishes four forms of liver abscess which appear to differ from each other only in their etiology.[1] They are: (1) large, generally single abscesses, caused by climatic conditions combined with certain conditions of living, food, and drink, *not associated with dysentery;* (2) those multiple abscesses *secondary to dysenteric ulceration*, with which are classed those occurring "in a person who is or has recently been suffering from fever ..... with Peyerian ulceration" (so far from regarding typhoid ulceration, as it is here stated to be, as a satisfactory cause for these abscesses, the very rarity of such an association—for I cannot find such a case on record—seems to me to throw some light on the question, as I shall try to show later); (3) those abscesses *coincident with, not caused by, dysentery*, malarial fever, and hepatitis, but all of these the result of climatic influences (why is the association with dysentery in the second form regarded as something more than coincidence, but not so in the third?—the third form is said to be "obviously different from the before mentioned," but no obvious difference is furnished); and (4) pyæmic abscesses in any climate secondary to "injury, ulceration of stomach, gall-bladder or duct, gall-stones, ulceration in other parts of the body, and especially in phlebitis of the portal vein or mischief in the pelvis or hæmorrhoidal region." Here Sir Joseph Fayrer has no hesitation in accepting these causes in giving rise to single large as well as multiple forms of hepatic abscess. The following are grounds he furnishes for regarding his first and third forms even when associated with dysentery as not secondary to that disease: 1. "Liver abscess may, however, be unassociated with dysentery or diarrhœa."[2] It is at least noteworthy that out of the 49 cases of liver abscess at the end of the article from which these quotations are taken, cases given to illustrate "the chief points of etiological, pathological, medical, and surgical interest of tropical liver abscess," not one case can be pointed to as certainly unassociated with a bowel lesion. Of these cases, 24 had a previous history of diarrhœa or dysentery, 5 had diarrhœa and 1 blood and pus in the stools under observation; 5 are stated to have had neither diarrhœa nor dysentery, and recovered; and in 14 there is no statement of any kind regarding the bowel function at any time, and of these 3 died, 2 being examined after death, one having ulcers and the other hæmorrhoids and cancer of the rectum—that is, of the 19 that had no bowel affection, stated or implied, the only two that were examined after death had lesions of the large gut.[3] 2. "Sir Ranald Martin and others thought that liver abscess was intimately connected with diseases of the cæcum, but this has not been altogether confirmed, for of 72 cases where the cæcum was affected in only 22 was there liver abscess."[4] Had Sir Ranald Martin and others stated that most cases of cæcal ulceration are followed by liver abscess such an objection might be admitted, but these writers held that liver abscess is usually preceded by cæcal ulceration, a very different proposition. The same fallacy occurs when Sir Joseph Fayrer objects "that in temperate climates liver abscess is not always found connected with dysentery," and then quotes a number of cases of dysentery in which liver abscess did not occur.[5] 3. Sir Joseph Fayrer appeals to statistics, saying: "Of 44 specimens of liver abscess in the Pathological Museum at Netley 11 were complicated by intestinal lesions."[6] He cannot possibly have realised that these figures are of absolutely no value—nay, even misleading—unless the remaining 33 specimens were ascertained to have no intestinal lesion, though this is what is implied if the figures are to have any meaning. This implication is far from being borne out by a perusal of the Netley Museum official catalogue (1892).[7] Out of 54 (not 44) specimens from as many cases of liver abscess, in 10 (not 11) there were intestinal ulcers and sloughs or cicatrices noted; in one case the entire reference to the intestinal condition runs: "The intestines, stomach, and kidneys were healthy"; and in another: "The mucous membrane of stomach and intestines more easily torn than natural, and in many places more vascular,"[8] these being the only two cases which can be made to represent the absence of intestinal lesion, *for in 42 there is no statement of any kind as to the condition of the intestine, large or small.* Sir Joseph Fayrer has here fallen into a grievous error by disregarding the considerations pointed out at the beginning of this paper. Professor Cayley in the same volume,[9] in an article on "Tropical Disease of the Liver," says: "Acute hepatitis may run on to suppuration, and this is the *most frequent* cause of *tropical liver abscess*" (the italics are in the original). Abscess is undoubtedly an unknown result of liver congestion and inflammation at home, and I venture to regard it as at least uncommon where tropical liver abscesses occur, for the following reasons. 1. I have never seen an abscess that could be attributed to this source independently of dysentery. 2. I have not seen a case of primary hepatitis pass on to suppuration. Among such cases there are, I believe, those which we puncture without finding pus and which appear benefited by the puncture. 3. Singapore cannot be regarded as free from hepatitis by any means, but it is singularly free from liver abscess and dysentery. The West Indies are not singularly free from hepatitis; why, then, is hepatic abscess so infrequent there, as Sir Joseph Fayrer says it is, if hepatitis be the most frequent cause of these abscesses? 4. Professor Cayley, in illustration of his paper, cites eight cases of hepatitis, four of which developed into abscesses. These were single abscesses, and all four had a history of dysentery. Three had no history of dysentery and did not suppurate, but one is entitled "Congestion of the Liver leading to Acute Hepatitis, the Effect of Hot Climates and Malarial Fever, and coming on after Dysentery," and of this case the writer remarks: "In this case the symptoms, though obscure, rather point to the presence of an abscess, which very likely might have been discovered by further exploratory puncture. If there is an abscess present it may absorb or may become encysted, and may eventually show itself by more direct symptoms."[10] It is not a little curious that all Professor Cayley's cases of suppurative hepatitis should have had dysentery! In addition to the records of 53 cases referred to above in "Hygiene and Diseases of Warm Climates," I have collected 125 others from the pages of THE LANCET and *British Medical Journal* for the years 1874 to 1894, 7 cases from Councilman and Lafleur,[11] which with the 54 cases in the Netley Museum in all amount to 239. Of these, 133 died and 106 of them were examined after death, and of the latter in 59 cases there is no statement of any kind as to the condition of the bowel, 41 gave evidence of dysentery, and in 6 the following quotations contain the entire references to the intestinal condition which could by any possibility be construed as a demonstration of the absence of ulcers or cicatrices: "abdominal organs are

[1] Davidson: Hygiene and Diseases of Warm Climates, p. 643.
[2] Ibid., p. 645. [3] Ibid., pp. 670-692.
[4] Ibid., p. 648. [5] Ibid. [6] Ibid.
[7] Catalogue of the Pathological Museum at Netley, vol. i., 1892, p. 309.
[8] Ibid., p. 311. [9] Davidson: Op. cit., p. 264.
[10] Ibid., p. 623.
[11] Johns Hopkins Hospital Reports, vol. xxxi., Amœbic Dysentery.

healthy,"[12] "the intestine was perfectly healthy,"[13] "the other organs were normal,"[14] "the intestines, stomach, and kidneys were healthy,"[15] "the mucous membrane of stomach and intestines more easily torn than natural and in many places more vascular,"[16] "kidneys and intestines pale."[17] Such figures and statements surely cannot be regarded as sufficient to decide the question that tropical abscess is usually a primary liver disease. In not a single instance is it explicitly stated that no ulcer or cicatrix was found in the large intestine, which I have never seen without either of these in a fatal case of liver abscess. Surely it is not too much to look for something more explicit than the statements above quoted, supported as my own experience is by these forty-one out of forty-seven cases, reckoning fatal ones only.

Sir Joseph Fayrer appears to distinguish between the large single, tropical abscess (his first form) and the dysenteric or pyæmic (second or fourth), by the latter containing necrosed parenchyma. I have observed this condition in the large single abscess, noted also by Kartulis, Councilman, and Lafleur, Calmette, Manson, and others. I have now under observation the earliest opened case I have dealt with. In it the discharge consisted almost entirely of necrosed masses of liver tissue. My experience is that, opened later, the contents would have been pinker, with less of these masses and probably in larger quantity; later still, more fluid, yellowish and of equal consistence. The waiting game is now played less often than formerly in dealing with these as with abscesses elsewhere. The case referred to is now well. Manson recently says "it may be safely asserted that in 75 per cent. of cases of hepatic abscess a history of some degree of dysentery can be elicited. It must be recognised, however, that in this association the order of events is not always the same; usually the dysentery is antecedent to the hepatitis (abscess?); sometimes the diseases are coincident; more rarely the hepatitis (abscess?) precedes the dysentery, and in not a few cases the conditions alternate." Here Manson commences with the association of hepatic abscess and dysentery, but as he proceeds with the argument he substitutes hepatitis, and winds up thus: "It was shown that the hepatitis (abscess?) may precede the dysentery, and could not, therefore, be caused by it."[18] It was not dysentery, but its history or symptoms that were shown to be co-existent with, subsequent to, or alternating with, abscess in a minority of cases. It is not justifiable to infer that in such cases there was no dysentery antecedent to abscess formation, since even where there is no history or symptoms of dysentery at any time in a given case ulcers of the large gut may be present notwithstanding. Neither is it altogether safe to use "hepatitis" and "tropical liver abscess" as interchangeable terms in discussing this question. The occurrence of hepatitis apart from dysentery is not doubted by anyone. So far as can be ascertained, then, when liver abscess and dysentery are associated, in the majority of cases the dysentery is antecedent, and in no instance of the minority is it possible to say with certainty that dysentery was not antecedent. Before pyogenic organisms were even dreamt of in connexion with abscess, Budd maintained, as every authority now does, the secondary nature of those abscesses included in Sir Joseph Fayrer's fourth division, but opposed by many; he also held that tropical liver abscess was secondary to ulceration of the large gut. From time to time pathologists have shown that in certain cases of dysentery, if not in all, submucous suppuration occurs in varying degrees, taking part in the formation of sloughs of varying sizes. Here, then, we have pyogenic organisms in the dysenteric lesion, in a region as closely related to the liver as suppurative mischief in the pelvic or hæmorrhoidal region, and just as by no means in every case of this latter kind, so not in every case of dysentery, can secondary liver abscess be expected to occur. Speaking of this matter, Manson lately says, "At one time if was held that the abscess was caused by the absorption of pus by the portal vein from the dysenteric ulcers and from suppurative phlebitis, which was supposed to be present in the intestinal radicles of that vessel. But no such phlebitis was demonstrated."[19] Surely a process involving submucous suppuration, necrosis, ulceration, or sloughing of the mucous coat of the large gut, supplies the required affection of the intestinal radicles of the portal vein, for it is impossible to imagine these radicles escaping. Why is it that typhoid ulceration is so seldom, if ever, associated with liver abscess even in the East Indies? This form of ulceration is confined to glands at the free margin mostly of the lower end of the small bowel, whereas in dysentery the ulcers are not confined to gland tissue or any particular part of the large bowel circumference. But what is probably of greatest importance is the part played by the suppurative process which occurs so frequently in dysentery, but so rarely, and if at all to such a small extent, in typhoid ulceration. Yet one other aspect of the matter has to be dealt with. The finding of an amœba in some of these abscesses is considered by most of the finders as affording further proof of their secondary relation to dysentery, more especially to what is termed "amœbic dysentery." There can be little doubt that the terms "dysentery" and "dysenteric ulceration" cover more than one disease process. Manson has recorded[20] the first case in England in which an amœba has been found in liver abscess, terming it an "amœbic liver abscess," and suggests that it was caused, in the absence of dysentery and the known pyogenic organism, by the dysentery amœba. The patient died, but unfortunately no post-mortem examination was made to decide that this was not one of those cases where the patient had dysentery without being aware of it. The view that abscess of liver, when not a part of a general pyæmia, is rarely primary, but usually secondary to lesions occurring in close relation to some part of the portal circulation; to those lesions in which pyogenic organisms (micrococci, and it may be amœbæ) are concerned, this view claims no more for suppuration in the liver than is being demonstrated more and more every day for suppurative processes in the brain, which latter are rarely primary.

Shanghai, China.

[12] Brit. Med. Jour., 1884, vol. i., p. 1087.
[13] THE LANCET, Jan. 7th, 1893, p. 19.
[14] THE LANCET, Nov. 17th, 1877, p. 715.
[15] Catalogue of Pathological Museum at Netley, vol. i., 1892, p. 309.
[16] Ibid., p. 311. [17] Davidson: Op. cit., p. 643.
[18] Quain's Dictionary of Medicine, new edition, vol. i., p. 1124.
[19] Ibid., p. 1126.

[20] Brit. Med. Jour., 1894, vol. i., p. 677.

CASES ILLUSTRATING THE SURGERY OF THE KIDNEY.

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(*Continued from p. 1429 of Vol. I., 1895.*)

BEFORE proceeding to the continuation of my cases I must record the safe delivery and good health of mother and son in Case 23, operated upon in 1888, and incidentally referred to in my last communication. This is the second of the tuberculous cases which has not only made a perfect recovery, but has also passed through pregnancy without any unusual complication. I have also the satisfaction of recording the complete recovery of the patient upon whom I performed Abernethy's operation for tying the iliac artery in order to get at two small stones in the lower end of the ureter. I heard from her a few days ago that she had been able to accompany the guns, walking over the moors in Scotland on several occasions this autumn, and for the first time. I have also received a very satisfactory report from my seventh case of nephrorrhaphy. The patient had before the operation been a confirmed invalid for years, and now reports herself as quite well and able to walk and swim, jumping off a boat into the sea. I will now proceed with the record of my cases of nephrotomy, following the same plan adopted with the nephrectomies, and giving a very brief note of the less interesting cases and a more detailed account of the unusual cases. I have already published my first thirteen nephro-lithotomies, in which there were one fatal case and twelve recoveries.[1] The present series commences with Case 14.

CASE 14.—The patient was a woman aged sixty-two years, small, thin, and fragile. The urine was of low specific gravity, containing much mucus, a little albumin, many blood cells, and clumps of granulation cells visible to the naked eye as minute white specks in the urine. There was no pain or difficulty in urinating. On palpation both kidneys could be distinctly felt, and were of normal size, the right being

[1] Harveian Lectures: Surgery of the Kidneys. By J. Knowsley Thornton. Chas. Griffin and Co. 1889.

very markedly tender. Three years before her admission into the Samaritan Free Hospital she was suddenly seized with violent pain in the abdomen while sitting in church; it lasted till night and recurred next day, and had continued more or less ever since, rarely being absent for more than a day or two at a time. It was sharp and stabbing, and shot over the abdomen and across the back. It was chiefly on the right side, but occasionally crossed to the left. I came to the conclusion that there was a calculus in her right kidney and removed it on March 30th, 1890, by the combined abdominal and loin incisions. It was an hourglass-shaped oxalate calculus in the pelvis of the right kidney. The left kidney was normal. Recovery was smooth and complete. The stone was about an inch long and had a very rough surface, and had evidently been adherent to the lining of the pelvis and ureter over nearly its whole surface.

CASE 15.—A married woman aged thirty-one years was placed under my care at the Samaritan Free Hospital by my friend Dr. Hamilton Bland. She had borne six children. On examining her pelvis I found a retroflexed, somewhat fixed, and tender uterus, and a very tender swelling about the size of a horse-bean at the entrance of the left ureter into the bladder. The urine had been thick for about twelve months; there had never been pain or difficulty in passing it, a symptom the absence of which I omitted to note in Case 14. The urine was of normal specific gravity, and contained a trace of albumin and a considerable deposit of pus and phosphates. She had passed a quantity of small stones about two months before admission, and some every time she passed water for about a fortnight. She first noticed pain in the left kidney when carrying her last child four years and a half ago. After its birth, while taking a long walk with the child in her arms, she was suddenly seized with severe pain in the abdomen, and a swelling came in the left side. She was laid up for six weeks, and the lump and pain recurred whenever she got about. I operated by the combined incision on April 23rd, 1890. I found the right kidney large, smooth, and healthy. In the pelvis of the left kidney there was a large stone. I removed it quickly and without difficulty through a small lumbar incision, and found that it was branched and showed two broken surfaces and several facets. Another piece was then extracted, fitting the largest broken surface. Then another large stone was detected and removed with difficulty; it had a deep groove in it where it had been grasped in the mouth of a calyx. Numerous small flat stones and some other broken fragments were also removed. The kidney was washed out with a solution of corrosive sublimate and the lumbar wound drained. I then found that the tender pelvic swelling was a hydro-salpinx and removed it. The patient made a slow recovery, only leaving the hospital on June 13th.

CASE 16.—A married woman aged thirty-one years had passed offensive urine from girlhood, the bladder not emptying itself properly. When seventeen years of age her horse ran away with her and she was strained internally and passed blood in the urine. Four years later there was an attack of pain and swelling in the left loin, and she had ever since had recurrences at frequent intervals. The attacks used to be frequent and short and without fever, but latterly had been prolonged and accompanied by severe fever, but at longer intervals. There was frequent and painful micturition during an attack, very little urine being passed. Her six children are all strong and healthy. The urine was of good specific gravity, with a small quantity of albumin, a few pus cells, oxalates, uric acid crystals, and renal and ureteral epithelium. I operated on April 24th, 1890, and found the exit of the left ureter from the pelvis blocked by a small stone and the kidney reduced to a mere bag, and I decided to remove it, but on examining the right kidney I found it also cystic and unhealthy and so contented myself with free incision and drainage of the left kidney. She made a slow recovery and remains in fairly good health, but she is subject to attacks of pain and fulness in the left loin, accompanied by fever, when she gets a chill or is over-fatigued.

CASE 17.—A married man aged thirty-one years had suffered from pain in the left renal region from childhood, and from time to time there had been blood in the urine. He now suffered from almost constant pain with occasional severe exacerbations laying him up for days at a time. On May 20th, 1890, I removed one large dark-brown oxalate calculus very irregular in shape and several smaller ones from the left kidney. The other kidney was quite healthy. The operation was rapid and without a hitch of any kind, there being very little handling of the kidney, a small, clean incision, and the stones were quickly and easily extracted. I emphasise these facts because of the subsequent history. He made an absolutely perfect recovery for a fortnight, when he was visited for the first time by his wife; he admitted much sexual excitement, followed by a nocturnal emission and pain in the left renal region; this recurred occasionally, and there was also pain on micturition from time to time. He went home apparently quite well at the end of three weeks and remained quite well for some months, still occasionally complaining of pain in the left loin. Then an abscess formed in the neighbourhood of the kidney and burst into the pleura, and he had pleuro-pneumonia and pneumo-thorax and died about seven months after the operation. I only heard of it some time afterwards. This unfortunate ending to a successful operation is useful as a warning to exercise great care in the after-treatment of these cases. I allowed the patient to get up too soon and to go home too soon, especially in view of the result of his wife's visit to him in town. I have no doubt that there was some disturbance round the kidney then, and that it never got quite right and was aggravated by sexual intercourse on his return home. I warned him to be careful, but saw that he did not believe in the necessity. I have not any good record of this case after he left my care, but it is interesting to compare it with Case 28 among the nephrectomies published in the Clinical Society's Transactions, vol. xxiii., p. 150, by Dr. Myrtle of Harrogate and myself, in which a large perinephric abscess burst through the lung, with complete recovery. The points I wish to emphasise are the importance of prolonged rest and care after these operations to allow of thorough consolidation of the cellular tissue about the renal wound, and the insidious way in which an abscess will form in these cases when the patient is apparently well. In neither of these cases was the presence of the abscess suspected till it burst into the chest. Similar suppuration occurred round the kidney in another case to be recorded in this series after a very smooth recovery.

CASE 18.—The patient was a married woman aged thirty-two years. I have lost the notes of this case taken before operation, but she had been very decidedly losing health, and her condition had been much worse after an attack of influenza. The diagnosis of right renal calculus appeared to me to be clear. I had no difficulty in finding and cutting down upon the stone, but it was so soft that it broke up in the forceps, and I had to wash it away by repeated injections. The process was a long one and there was a great deal of shock; whether there was also too great absorption of carbolic acid has occurred to me as aiding in the unfortunate result. The patient was in a low and depressed condition before the operation, and on the morning of the day the temperature was very much below normal. I left the patient without any uneasiness, but on looking in just before dinner I was surprised to find that she was still unconscious, and, indeed, had never rallied at all from the operation. She was breathing stertorously and was almost pulseless, the skin being cold and the respiration feeble and irregular. Later in the evening she recovered consciousness for a few hours, but could not speak correctly. She died twenty-seven hours after the operation, with complete suppression of urine four hours before death. I have never in any other case met with a stone of this kind; it appeared to be made up entirely of soft phosphatic matter, which at once crumbled away when I grasped it with the forceps, and I could not find any hard nucleus. When I first felt it, it was an almond-shaped stone of about the size of a haricot bean occupying the pelvis at the mouth of the ureter.

CASE 19.—A single woman aged twenty-eight years, who had suffered from symptoms of left renal calculus for many years, and for two years had been a confirmed invalid, was brought to me in the spring of 1891 by Mr. Aikin. The kidney was quite out of reach under the ribs, and I could not get a suspicion of tenderness by palpation, but all the other symptoms were so marked that I had no hesitation in recommending operation. The urine was of good specific gravity, contained no albumin, much mucus, some pus, and blood cells, and deposited lithates freely. I operated on March 9th, 1891, and was some time in finding the stone, which projected from one of the calyces into the pelvis, in which position it was so firmly grasped that I had great difficulty in extracting it. The stone was a pear-shaped oxalate one

covered with sharp spicules and had a large angular projection which had prevented its escape from the calyx and caused the difficulty in its extraction. The patient made a good recovery in spite of the terrible shock of losing the sister who lived with her, who died after a few days' illness from diphtheria while she was in the same house and not yet well enough to leave her room after the operation. She is now married and in excellent health, and able thoroughly to enjoy life.

CASE 20.—A young man aged twenty-five years, single, had suffered from symptoms of calculus for two years before I saw him. There was marked pain on pressure over the situation of the junction of the ureter and pelvis of the left kidney. Pain was almost constant, but it was worse after any unusual exertion, and he had had several severe attacks. I found several small stones in the pelvis of the kidney; the largest broke in extraction, and I was eventually obliged to wash them out of the kidney with a continuous stream of hot water, which was useful in checking the hæmorrhage, the latter being unusually severe, and kept up, I have no doubt, by his taking the chloroform very badly and getting all his tissues loaded with venous blood. He made a good recovery, but has always had more or less blood in his urine since the operation, and latterly has had other symptoms which make me fear that a stone must have been left behind, so that I am going to reopen the kidney. I should have mentioned that the urine examined before operation was of low specific gravity, and contained a trace of albumin, oxalates, and blood cells. The urine passed just before I first examined him was clear, and that passed just after the examination contained blood.

CASE 21.—The patient was a young married woman, seen in consultation with Dr. Stivens and Sir William Broadbent. The exact nature of the illness was very obscure, but renal calculus was not suspected. I made a small incision in the loin and then pushed Sir Joseph Fayrer's grooved trocar cautiously into the kidney and let out a lot of pus. I enlarged the opening with a bistoury slid along the groove in the trocar, and on introducing my finger found a rough angular stone in the pelvis; this I removed, and then well flushed the kidney with warm water and drained it. Convalescence was very slow and there were many relapses, the tube having to be reintroduced over and over again in consequence of fresh suppuration in the kidney after she had apparently recovered. In some of these illnesses I saw her, and in some she was under the care of others, but she eventually got well.

CASE 22.—The patient was a single woman aged thirty-five years, seen in consultation with Dr. Ord and Dr. Falls. A right renal calculus was diagnosed and removed without difficulty; recovery in all respects was satisfactory, as is also her present condition.

CASE 23.—This was that of a young married woman upon whom I had operated for ovarian tumour many years before, removing a solid brain-like sarcoma, which I thought was almost certain to recur speedily; but she got quite well and bore several children after the operation. In September, 1891, seven months after her last pregnancy, she began to suffer much pain in the left renal region; during the pregnancy she had suffered much from what was thought to be severe cystitis, and when she got about again had some attacks of renal colic. She was attended by Mr. Maurice of Reading, and I had frequent communication with him about the case from time to time after the ovariotomy and up to the time of this final illness. I operated by the combined method in November, 1892, and quickly found a stone in the left kidney—this was one of the quickest operations I ever undertook. I could detect nothing wrong with the other kidney except that it was rather large and loose. She appeared at first to be making a rapid recovery, but then had a serious relapse, and I had to reopen the lumbar wound into the kidney. This gave relief for a time, but her condition was not satisfactory, and she began to complain of pain in the other kidney, which I found to be distinctly enlarging, and eventually it became so painful that I incised it through the loin at her urgent request, letting out pus and blood. Both kidneys continued to discharge, still giving her much pain, and she rapidly emaciated and died. I did not obtain a post-mortem examination, but I have little doubt, from the symptoms observed during the progress of the illness, that there was a sudden outburst of malignant disease in both kidneys. Dr. Guillemard of Southsea, who had attended her shortly before the operation, told me that he had on two occasions after she had had attacks of hæmorrhage found masses in the urine which appeared to him to be casts of the pelvis and upper end of the ureter, more or less coated with phosphates, and similar masses escaped from both kidneys after the loin openings were made free. I have seen similar casts of the ureter in other cases associated with malignant disease invading the pelvis of the kidney, but I have never met with them in any case of renal calculus. Supposing that the disease was already in progress in the left kidney when I removed the stone, it might well in an early stage have escaped my notice; then came the marked improvement and apparent recovery, which lasted as long as the kidney was freely drained and ended when I allowed the wound in the kidney to close up. The other kidney meantime becoming infected as a direct result of the wounds in the left kidney—watching the case closely and anxiously as I did, for she was a great personal friend as well as patient—this was the only explanation I could find for the symptoms and mode of death.

(To be continued.)

CASE OF RECOVERY AFTER TREPHINING IN TUBERCULOUS MENINGITIS.[1]

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THIS subject having been recently brought forward, the notes of the following case occurring in private practice may be of interest, particularly as at the time it was believed by those concerned to be the first time that the operation had been deliberately performed in this disease.

The patient, aged ten years, was a little light-haired boy of slight build, with marked internal strabismus and wearing glasses (+ 4 dioptres); he is clever in many ways, being, for instance, the best fiddler in the school band, but backward in ordinary school work. His father is clever in a low mental way and generally out of work. He has a neurotic mother, and a sister with hystero-epilepsy. There is on both sides a strong tuberculous family history; the patient's maternal uncle is reported to have died from tuberculous meningitis. The boy's illness began indefinitely; some abdominal pains had been complained of for about two months, and for two or three weeks he had been out of sorts and had done many strange things. He had lately had headaches, and on March 13th, 1895, and again on the 15th, was sent home from school ill. On the 16th he went in from play with a very bad headache, and was so ill that Mr. G. H. Dodd was consulted, who sent the patient to me on the following day. I found him complaining of headache, with intense exacerbations and intolerance of light and sound. He was feverish, with a dirty tongue and suffering from constipation. There was no other indication of ill-health; the lungs were healthy, and there was no optic neuritis or *tache cérébrale*. During the next ten days he steadily got worse, the pulse varying from 88 to 100, and the temperature from 99° to 100° F., being generally highest in the morning. He had intense exacerbating headache, night sweats, loss of flesh, cerebral vomiting, and delirium, also wetting the bed, and a meningitic cry and attitude were developing. On March 24th he was very excitable; he said he saw red lights and complained of his neck being stiff on the right side behind. He felt as if falling to the right when standing, but actually tended to fall backwards. He generally lay on the right side and sometimes knelt with the head on the pillows. On March 26th it was noticed that he slept much with his eyes open, the hands flexed, and the knees drawn up. There was optic neuritis in the left eye, the edges of the disc being pulpy and indistinct, with some lymph about the vessels; the right disc was normal. The bowels had not been opened for five days. During the evening there was a general convulsion, the head being drawn back and to the right. He was semi-conscious and in great pain, and was put freely on opium in order to lessen the distress. An operation having been consented to, I at 11 A.M. next day gave chloroform, and Dr. T. Jason Wood, assisted by Mr. Dodd, trephined one and a quarter inches above and the same distance behind the left meatus auditorius externus, removing a half-inch button. The dura mater bulged considerably; it was reflected, very little fluid escaping and the brain not pulsating. A fine cannula

[1] The patient was shown at the meeting of the Bradford Medico-Chirurgical Society on May 7th, 1895.

was passed twice two and a half inches in the direction of the ventricle; no fluid escaped, but the brain began to pulsate. Half a dozen strands of silkworm gut were then with difficulty passed beneath the membranes towards the base; they seemed to go about one and three-quarter inches downwards, the free end being brought out at the edge of the wound, which was then stitched, dusted with iodoform, and covered with dry sublimate wool. After six hours' deep sleep, due probably to two and a half grains of opium given during the eighteen hours before the operation, the child was much better. Nine hours after the operation he was clear mentally, and free from headache for the first time for at least ten days; next day the bowels were moved after calomel. Sixty hours after the operation the dressing was changed, clear fluid draining off in small quantity; subsequently the dressings were changed every third day. On the fifth day after the operation the neuritis was noted as still being well marked. On the sixth day the patient suffered from headache for three hours; he had delusions, saw little men in the room, and later had a general convulsion. On removing the dressing the wound and drainage-tube were found to be sealed with a hard scab; this was loosened, and there was no further trouble. The drainage-tube was finally removed on the seventeenth day, the discharge having much diminished, and within a month of the operation the boy was playing cricket. The temperature then remained at from 99° to 100°, at intervals he had night sweats, and during the early part of September a recurrence of the paroxysmal headache with vomiting occurred, causing anxiety for nearly a fortnight. There was no advance in the symptoms, the vomiting was chiefly after food, and it was thought that a great part of the illness was hysterical, but it subsided gradually, and the patient now seems to be well, except for his regularly elevated temperature.

Remarks.—The whole course of the illness up to the time of the operation was typical of tuberculous meningitis. The slight localising indications pointed to most irritation about the base on the left side. The neuritis was indefinite for localisation—it was taken, if anything, as in favour of the other symptoms. The operation was performed with the idea that the affection was most severe about the base on the left side; it was followed at once by disappearance of the headache. The remission of temperature after operation noted in cases which have since been published was absent in this case. It is possible, having regard to the continued feverishness and the illness in September, that there is some massive tubercle about the base, and that there was an intercurrent attack of meningitis, but there can scarcely be a doubt that the operation relieved the symptoms and averted impending death. One would judge from this case that trephining is justifiable in tuberculous meningitis, if only to relieve headache, and ought to be done as soon as the diagnosis is clear, before the paralytic stage is reached, and that drainage can be kept up with advantage for a considerable time.

Bradford, Yorks.

IRISH MEDICAL SCHOOLS' AND GRADUATES' ASSOCIATION.—The autumn general meeting will take place at the Café Monico on Tuesday, Nov. 12th, at 6.30 P.M., and the autumn dinner of the Association at the same place at 7 P.M. Lord Russell of Killowen, the Lord Chief Justice of England, will be the guest of the Association on the occasion.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.—The annual meeting of this society was held in the medical library of University College on Oct. 9th. Mr. A. W. Prichard, President, gave his inaugural address, which dealt chiefly with the surgical aspect of disease and accident as occurring in the boys of Clifton College. He mentioned numerous interesting cases, and insisted that there was a great benefit obtained by the following out of the course of athletics and games as arranged at that great public school. The honorary secretary (Mr. Paul Bush) read his annual report, as did also the assistant editor and honorary librarian (Mr. L. M. Griffiths). These reports were adopted. The following officers were elected:—President Elect: Dr. Aust Lawrence. Honorary Secretary: Mr. J. Paul Bush. Committee: Dr. Michell Clarke, Mr. Dacre, Mr. W. Harsant, Dr. B. Rogers, Dr. Shaw, and Mr. Munro Smith. Mr. L. M. Griffiths, Dr. Parker, and Dr. Jas. Swain were elected to serve on the Library Committee.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. THOMAS'S HOSPITAL.

A CASE OF INJURY TO THE ASCENDING COLON; FORMATION OF INTRA-PERITONEAL ABSCESS; INCISION; FÆCAL FISTULA; RECOVERY.

(Under the care of Mr. G. H. MAKINS.)

THIS is one of those cases which serve to emphasise the teaching that every injury to the abdomen should be kept under careful observation for several days, for it is a well-understood fact that serious injury may be done to the abdominal contents by direct violence without any definite evidence of its extent at the time or within a few hours. Shock is a very variable symptom and unreliable, therefore the absence of shock should not be looked upon as a proof that no lesion has followed such a severe nipping of the abdomen as had been experienced here. It is possibly due to the great care exercised by the patient's medical attendant that more serious consequences did not follow before the 26th. In the larger number of instances of intestinal injury the small intestines, being the most exposed, are damaged, and the colon escapes. Such cases as the following are very rare, almost unknown, therefore the remarks by Mr. Makins will be found very valuable.

The patient was a man aged twenty-four years, whose family and previous personal histories were good. On Aug. 1st, 1895, while engaged at work, he was caught between two trucks passing each other. He was forcibly turned round and round between the two waggons until they came to a standstill, when he dropped to the ground. He was taken to the hospital and examined, but as only superficial contusions were detected he was taken home; here, however, he was kept in bed by his medical attendant, Dr. Crossman. The patient suffered from some pain in the abdomen, which was not of a severe character, but not from sickness or any other symptom pointing directly to the intestinal tract. His temperature, however, was raised above normal, reaching 100° F. or more in the evenings, and his appearance suggested internal mischief. On the 26th he was allowed to get up, and he was then seized with sudden pain in the right half of the abdomen, and his urine was found to contain a considerable quantity of blood. His bowels continued to act, though somewhat irregularly, and there was no sickness, but a distinct swelling was to be felt in the right half of the abdomen. On Sept. 3rd he was sent to St. Thomas's Hospital by Dr. Crossman. There was some emaciation, which had been gradually increasing; the face was thin and flushed, and he complained of much pain in the abdomen, lying in the supine position with the knees drawn up. On examination of the abdomen a large, tense, elastic swelling with ill-defined margins was found in the right half, extending almost from the lower costal margins to Poupart's ligament. It was dull on percussion, the dulness, however, not extending into the right flank, and in the lower part fluctuation was distinct. The evening temperature reached 100°. The urine contained a trace of albumin, but no blood. On the 6th he was anæsthetised with ether, and an incision was made over the most prominent part of the swelling, at the outer margin of the rectus. The abdominal wall was infiltrated and stiffened, but no pus was met with until the peritoneal cavity was reached. An irregular cavity walled in by intestine was then opened, the ascending colon being firmly adherent to the anterior abdominal wall at the outer limit of the space. The pus was extremely offensive, fæcal in odour, and dirty-coloured, but no distinct fæcal lumps were present. The cavity was abundantly lined with lymph, and no definite opening in the intestine could be discovered by the escape of either fæces or gas. A large drainage-tube was inserted, and the wound was partly sutured with silkworm gut after the

cavity had been thoroughly flushed with hot sterilised water. On the 7th he was found to have been very comfortable and to have slept well, there being no pain. The wound was dressed, the discharge from the tube being distinctly fæcal. For the next three days a small amount of fæces escaped daily, and the purulent discharge was abundant. After the 11th, however, there was no further appearance of fæces, and the pus, though still foul, became gradually sweeter and less abundant. He steadily improved in his general condition, the temperature remaining normal, and he rapidly regained flesh. The tube was gradually shortened and finally removed on the 30th, little induration remaining around the wound. On Oct. 7th the latter had entirely closed, and on the 9th he left the hospital well.

Remarks by Mr. MAKINS.—The main interest in the above case seems to centre in the question as to whether the original injury to the colon was intra- or extra-peritoneal in position. When such accidents are not rapidly fatal the explanation is usually to be found in the fact that the rent in the colon has occurred in the extra-peritoneal segment, hence extravasation takes place into the retro-peritoneal tissue of the loin, and the general peritoneal cavity escapes. In these cases, however, the abscess usually forms in the loin, while in the above instance the abscess was intra-peritoneal and also within the line of the ascending colon. Two modes of explanation seem to suggest themselves. First of all there seems to be little doubt that the original injury did not amount to an actual rent, or, if it did, that the rent was very small in extent. Under these circumstances adhesive inflammation may at once have commenced, and when the serious trouble took place on Aug. 26th there may have been some preparation for the limitation of the fæcal abscess. It seems, however, more likely that the injury in this case was in the posterior segment, the injury in the first instance being perhaps either a very slight rupture or severe contusion without an immediate rent, escape of the contents of the gut occurring only on the twenty-fifth day, when the patient tried to get about (Aug. 26th). The simultaneous occurrence of hæmaturia seems to afford corroborative evidence of some value in localising the injury to the inner side of the bowel—i.e., that nearest to the right kidney; while the adhesion of the bowel to the anterior abdominal wall noted at the time of operation also seems to point to the bowel having been pressed forward. Hence the absence of a palpable swelling of the loin in the usual position would be explained by the fact that the original injury, affecting the colon and kidney, so damaged the peritoneum covering them both as to render the passage of escaping fæces and pus more easy in the direction of the abdominal cavity than into the loin, and this is perhaps the more likely when the chronicity of the sequence of events is taken into account, the retro-peritoneal tissue in the immediate neighbourhood of the injury having become more dense from inflammatory induration. The dark colour and lumpy nature of the fæcal discharge seemed to leave no doubt that the colon was the portion of bowel injured.

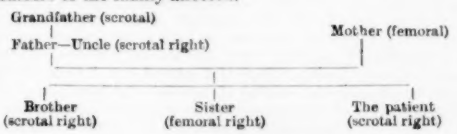
SWANSEA HOSPITAL.

A FAMILY HISTORY OF HERNIÆ.

(Under the care of Mr. J. KYNASTON COUCH.)

A SERIES of cases of hernia all occurring in one family has not often been brought forward. The tendency to defective construction at those spots in the abdominal wall where the anatomical design is weakest is hereditary—as would be expected; but the fact is so very familiar to all that surgeons have been prevented from publishing their experiences. In this interesting series it will be seen that this particular patient had a double vicious history, both parents having been affected, the father with the right scrotal hernia common to *his* father, brother, and son, and the mother also having a femoral hernia. It would seem most probable that the lad inherited his defect—over-patent inguinal rings—from his father, but the laxness of tissue present in his mother's case, and shared by his sister, as shown by their possession of femoral herniæ, may have counted for something in the size of the protruded mass. For the notes of the case we are indebted to Dr. Stephen Floyd, resident medical officer.

A well-developed boy aged seven months was admitted into Swansea Hospital with an enormous congenital scrotal hernia. It was as large as a good-sized orange and quite obliterated the penis. On radical cure being performed it was found to contain a great part of the small intestine, the cæcum, and part of the ascending colon. The patient made a perfect recovery. The appended schedule shows the different members of the family affected.



Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

On Posture in its Relation to Surgical Operations under Anæsthetics.

THE first meeting of this society for the present session took place on Oct. 22nd, Mr. HUTCHINSON, President, being in the chair.

Dr. ORD presented to the society the volume on "Climatology and Balneology" recently published by Messrs. Macmillan and Co. A committee was appointed by the society during the presidency of Sir Edward Sieveking, and the present book was the first volume of the work. It comprehended chiefly the climatology of the south coast of England and a description of the more important medicinal springs of Great Britain. Dr. Dickinson had dealt with Cornwall and the Scilly Isles, Dr. Symes Thompson and Dr. Lazarus-Barlow had described Devonshire and the Channel Islands, Dr. Mitchell Bruce had undertaken the compilation of that section dealing with Somerset, Dorset, and Hants, while the south-eastern counties—Surrey, Sussex, and Kent—had fallen to the lot of Dr. Ewart. All had worked zealously, and it was hoped that the medical public would appreciate the results of their labours.—The PRESIDENT remarked that the committee was an innovation on what had been accomplished by the society in the past, and he alluded in grateful terms to the valuable services rendered by Dr. Ord, the chairman of the committee.—Sir EDWARD SIEVEKING considered that the committee, which had admirably managed its business, should be made a standing one, to which the profession could turn in case of requiring advice or desiring to record climatological or other phenomena. He moved a vote of thanks to the committee and eulogised especially the services of the secretary, Dr. Archibald Garrod.—Dr. DICKINSON said that the committee was indebted to many observers in various parts of the country for valuable information. He proposed that each of these gentlemen should be presented with a copy of that paper in which his contribution appeared.—The vote of thanks to the committee was carried unanimously. The President presented the annual volume of the Transactions for 1895.

Dr. FREDERIC HEWITT and Mr. MARMADUKE SHEILD brought forward a paper on Posture in its Relation to Surgical Operations under Anæsthetics. They pointed out that the posture of a patient prior to, during, and after a surgical operation under an anæsthetic was a matter of considerable importance to the surgeon, to the anæsthetist, and in many cases to the patient himself. The subject was discussed under the following headings:—1. The posture of the head in its relation to that of the trunk; extension, flexion, and rotation of the head were considered. Stress was laid upon keeping the head, whenever practicable, in the longitudinal axis of the body. The circumstances which favoured the entrance of blood into the larynx and trachea were defined. 2. The influence of the force of gravity upon the circulation and respiration. The observations of Snow, the Hyderabad Commission, and of Dr. Leonard Hill were quoted; and the administration of anæsthetics to patients in the sitting and semi-recumbent postures was discussed. 3. The postures of surgery individually considered: (*a*) The dorsal, supine, or horizontal posture; the advantages of keeping the head turned to one side, and the disadvantages

of allowing a patient to lie face upwards, and with the head slightly extended; (*b*) the dorso-lateral posture; (*c*) the lateral posture; its advantages in most major operations within or about the mouth and nose; operations for empyema. (*d*) The latero-prone and prone postures; necessity for caution when patients of certain types were placed in these positions. (*e*) The semi-recumbent posture; its disadvantages except in a few special cases. (*f*) The sitting posture. (*g*) Special postures, including the lithotomy, the semi-inverted, Trendelenburg's, and the knee-elbow. 4. The posture of the patient after the operation. Remarks were made concerning the raising of patients for bandaging &c., the application of bandages after an empyema operation, and the appropriate positions for patients when the circulation was feeble. Dr. Hewitt and Mr. Sheild strongly urged the advantages of at once turning patients upon the side after an operation, provided, of course, that there were no special contra-indications.—The PRESIDENT said that the subject dealt with in this manner was a novel one, and Dr. Hewitt and Mr. Sheild had handled it in a very thorough and painstaking way.—Mr. R. GILL regretted that the chief part of the paper was occupied with generalities, and that a particular anæsthetic was not mentioned when dealing with a particular posture. He could not agree that many of the positions described were so dangerous as had been maintained in the paper; for instance, in the supine posture with the head extended it must be very rare for blood or vomit to find its way into the air passages.—The adjournment of the debate was agreed to, being moved by Dr. SCANES SPICER and seconded by Dr. SANSOM. Dr. Sansom added that he regarded the paper as a most valuable one, and held that alterations of posture under anæsthetics were of the most extreme moment and importance.

OPHTHALMOLOGICAL SOCIETY.

President's Address.—Bilateral Glioma of the Retina cured by Enucleation of the Two Eyes.—Detachment of Choroid.—Exhibition of Specimens.

A MEETING of this society was held on Oct. 17th, Mr. NETTLESHIP, President, being in the chair.

Mr. NETTLESHIP thanked the members for the honour done him in his election to the presidental chair. He adverted to his association sixteen years previously with those energetic spirits who were foremost in establishing the society, among whom he specially mentioned Dr. Brailey, Dr. Stephen Mackenzie, and the late James Adams, who influenced Sir William Bowman to launch the society. The President paid a graceful compliment to his predecessor, and pointed out that the Ophthalmological Society was a great educational institution and would continue so while its members preserved open minds and kept abreast of the growing knowledge of their subject. He spoke in high terms of the value of special hospitals and the special departments of general hospitals, with the friendly rivalry and intercommunication which greatly advanced the knowledge and skill of their officers. The material for study in ophthalmology was inexhaustible, but he thought the subjects might be usefully divided into three classes—namely, (1) rare diseases and conditions which were worthy of record and of which he instanced numerous cases; (2) subjects capable of final settlement by collective information submitted to a committee or discussion; and (3) subjects which could best be treated in separate monographs.

Mr. TREACHER COLLINS read a paper on Four Cases of Bilateral Glioma of the Retina cured by Enucleation of the Two Eyes. He first referred to the paper in which Mr. Lawford and he had shown that there was no authentic record of a case in which a gliomatous growth had recurred later than three years after enucleation of an eye for that disease. He related histories of the following four cases. Case 1. A boy who had his right eye excised for glioma when five months old and his left eye three years later. Three and a half years after the removal of his second eye he was alive and well, and there was no sign of any recurrence. Case 2. A girl whose left eye was excised for glioma when five months old and the right eye nine months later. She was seen to be in perfect health four years and seven months after the removal of the second eye. Case 3. A girl whose left eye was excised for glioma when ten months old and the right eye thirteen months later. Four years after removal of the second eye she was in good health and there was no sign of any recurrence. Case 4. A boy both of whose eyes were excised for glioma when he was one year and four months old, the left being a shrunken one. Three years and three months later he was in good health and had no sign of any recurrence. Seeing that all these four patients were alive and in good health, without any sign of recurrence, after an interval of more than three years from the date of removal of the second eye—that is, after the longest interval at which there is any authentic record of a recurrence having occurred—he thought he might justly claim that they were cured.—Mr. LANG reported three cases, two of which were described by Mr. Collins. In the third case operation was refused and only consented to when pain occurred and after the nerve was affected, the child dying at about eight years old with secondary growth.—Mr. LAWFORD quoted a case in which the first eye was removed at two months. Two and a half years later the second eye was affected; operation was refused and two years later sight was almost gone. At four years the eye became painful and was removed, but the nerve was invaded and the ultimate fate of the patient was still undecided.—Mr. P. SMITH related a case in which it was recorded that both eyes had been removed for cancer, the patient being about eight years old. This was at the Birmingham Infirmary.—The PRESIDENT recorded a case, the patient being now living, in which both eyes had been removed, the second three years ago.

Mr. C. DEVEREUX MARSHALL read a paper on Detachment of the Choroid. Three cases had recently come under his notice. The first case was the eye of a youth aged twenty years who suffered from glaucoma. Iridectomy was done, and three days later the eye became very painful owing to a large hæmorrhage having taken place beneath the choroid. On examining it after removal the choroid and retina were found to be completely detached. The second case was that of a man aged sixty years, who had suffered from glaucoma. Iridectomy was done, but the eye shrank and was removed. There was an extensive detachment of the retina and choroid; the subchoroidal space was filled with new tissue in which cyst-like spaces were developed. Microscopic examination proved it to be the much-thickened lamina supra-choroidea and lamina fusca; the small spaces contained pigment and were probably lymph channels. The third case was that of a man aged sixty-eight years who had a cataract extracted; the vision equalled $\frac{6}{12}$ and J. 1 afterwards, but six months later it failed. As it was feared that the eye contained a new growth it was removed. There was almost complete detachment of the choroid and retina; the only places where the coats remained attached to the sclerotic were where the vessels and nerves penetrated; thus there were four large balloon-shaped detachments, the subchoroidal space containing nothing but serous exudation. The first case is similar to that condition met with after an accident resulting in the loss of a large quantity of vitreous, and it is occasionally seen after cataract extraction, but here the hæmorrhage probably did not come on for three days after the operation, and there was no loss of vitreous. The last case is the most uncommon. The detachment probably came about as the result of (*a*) hyalitis, leading to shrinking of the vitreous; (*b*) choroido-retinitis; and (*c*) serous exudation poured out between the choroid and sclerotic. The diagnosis previously to removal is most difficult. The tension is usually diminished, and this is the most distinctive feature between the simple detachment and that due to a growth.

The following were the card specimens exhibited:—

Dr. ERNEST CLARKE: (1) Rare Form of Nystagmus; and (2) Orbital Tumour.

Dr. MOTT and Mr. TREACHER COLLINS: Case of Exophthalmos with Trigeminal Hemianalgesia.

Mr. KENNETH CAMPBELL: Case of Anophthalmos.

Mr. A. S. MORTON: Snellen's Operation for Symblepharon.

Mr. HIGGENS: Unusual Form of Conjunctivitis.

Mr. LAWFORD: Case of Retinitis Circinata.

HARVEIAN SOCIETY OF LONDON.

The Climate of Egypt.

A MEETING of this society was held on Oct. 17th, the President, Sir JOHN WILLIAMS, Bart., being in the chair.

Dr. E. SYMES THOMPSON read a paper on the Climate of

Egypt. Dealing first with the journey thither, he thought the long sea route was often the less fatiguing. Invalids should land at Alexandria. A short stay at Ramleh both before and after the Nile journey should be made by those who leave England in October and return in May. The sulphur baths of Helouan were useful to those who were unequal to the social activity of Cairo. The Mena House Hotel, close to the Great Pyramid and on the edge of the desert, afforded a sunny haven for those unable to ascend the Nile. Luxor and Assouan, he said, were very warm in November. In February the temperature in the shade reaches 100° F. at these places, and January and February are the best times to be there. Invalids should be warned of the danger of chill at sundown on the Nile. Comparing Luxor and Assouan, he said that the air was drier at the latter place. The dangers of life in a *dahabiyeh* must be borne in mind, and it is often safer to travel by steamer. The hotels at Luxor and Assouan were commended. The indigenous maladies of Egypt were described. The warm, dry air was said to be of use in bronchial affections with emphysema, in case of quiescent phthisis in all stages, especially when of pneumonic, broncho-pneumonic, or pleuritic origin, and particularly when the disease follows influenza, measles, or enteric fever, and naso-pharyngeal catarrh. Hypochondria, hysteria, and neurasthenia were also benefited, and chronic cardiac and renal diseases do well in the climate; whereas, further, the electrical condition of the desert air sometimes interfered with the sleep of healthy persons, it acted otherwise on sufferers from hysteria. In conclusion, Dr. Symes Thompson drew a comparison between Egypt, the Alps, the Canaries, and the Cape.

Dr. JALLAND considered that Assouan afforded the best climate in Egypt. The cold weather in Cairo lasted from four to six weeks, but was less higher up the Nile. At Assouan the land was not cultivated, and the inundations of the Nile were not unhealthy. It was also a clean town.

Dr. CANNEY said that dry desert air was what patients sought. In this respect Luxor had great advantages. He advocated an earlier arrival in Egypt than Dr. Symes Thompson proposed, and thought the beginning of November a good time to go there.

Dr. SQUIRE, Dr. CHAPMAN, and Dr. WHARRY also spoke, and remarks by the PRESIDENT terminated the proceedings.

BRITISH GYNÆCOLOGICAL SOCIETY.

A New Method of performing Abdominal Hysterectomy.—Exhibition of Specimens.

A MEETING of this society was held on Oct. 10th, Dr. CLEMENT GODSON, President, being in the chair.

The PRESIDENT announced the death on the previous day of Dr. Thomas Keith, a distinguished honorary Fellow of the Society. This was an irreparable loss, both to the society and to the world at large. He asked the Fellows to pass a vote of condolence with the family of Dr. Keith in their sad bereavement.—Dr. ROBERT BARNES and Dr. BANTOCK supported the President's motion in sympathetic terms, and the vote was passed unanimously.

Mr. F. BOWREMAN JESSETT read a paper on a New Method of performing Abdominal Hysterectomy, with Five Successful Cases. After briefly alluding to the history of abdominal hysterectomy Mr. Jessett pointed out that the methods of performing the operation may be divided into three classes—(1) the extra-peritoneal method of dealing with the stump by the use of Koeberle's clamp; (2) the subperitoneal method of dealing with the stump after removal of the tumour; and (3) total extirpation. Objection was taken to the extra-peritoneal method on account of the high mortality after the operation, the excessive pain caused by the dragging on the stump, the length of time which must elapse before the stump separates, and finally the weakening of the abdominal walls. Many of these objections are overcome by those surgeons who adopt the subperitoneal method. But in these the mortality is high, and Mr. Jessett pointed out that, there being a space between the roof of the vagina and the peritoneum which has been laced over the floor of the abdominal cavity, if there is any oozing of blood from the flaps a large hæmatocele may and often does result, which has in many cases broken down and suppurated. Moreover, if there should be any accidental hæmorrhage no notice is given of it until the patient may be in a collapsed condition. By total extirpation of the whole organ all these objections are overcome, but it was to the method of performing this operation that Mr. Jessett drew attention and submitted certain details which he has carried into practice with satisfactory results. Hitherto operators after removal of the entire uterus with its tumour have laced or stitched the two peritoneal surfaces of the flaps together across the pelvis, thereby restoring the floor of the abdominal cavity. Difficulty hitherto has been experienced in opening up the roof of the vagina, some accomplishing this per vaginam, and others by having an assistant's finger passed into the vagina. To overcome this difficulty Mr. Jessett has had a bivalved speculum made nine inches long, which an assistant passes into the vagina when the tumour is delivered through the abdominal wound; by having this instrument pushed well home the roof of the vagina is put upon the stretch, and it is an easy matter after the anterior and posterior flaps are reflected from the tumour to cut down upon the ends of the blades before and behind and then to ligature the uterine arteries on each side. By dividing the tissues between these ligatures and the cervix the uterus and tumour are lifted out. But it was on the treatment of the flaps that Mr. Jessett laid particular stress. He contended that by lacing these across there is a large raw surface left which will, or may, be a source of septic trouble afterwards. To overcome this he proposed that long loops of silk, some four or six in number, should be passed through these flaps at their edge so that the knot is made to come out through the speculum in the vagina by catching the loop in a specially made instrument. When all these loops are passed they are drawn taut, and the peritoneal flaps are in this way everted and doubled upon themselves into the vaginal roof. The vagina is then packed with strips of iodoform gauze, the speculum withdrawn, and the abdominal wound closed. All the patients on whom Mr. Jessett has performed this operation have convalesced easily and well, in fact just as after an ordinary ovariotomy or vaginal hysterectomy. Mr. Jessett read short notes of five cases in which he had operated successfully by this plan. The chief points in this operation are—(1) the use of the long speculum passed up the vagina, by means of which the uterus is somewhat lifted up and the roof of the vagina put on the stretch, which enables the operator to cut with precision into the vagina from above; (2) the treatment of the peritoneal flaps—by everting and drawing these down through the vagina the two peritoneal surfaces are brought into accurate apposition, and by being doubled on themselves raw surface is apposed to raw surface, and also free drainage is established at the lowest point of the abdominal cavity, through the vagina if required; (3) the flaps, being drawn down in this fashion, form a plug to the roof of the vagina, and the floor of the pelvic cavity is much firmer than if the peritoneum is simply laced across—moreover, by this method a large raw area is left, which is much more likely to cause suppuration; (4) by removing the whole uterus in this manner there is very little hæmorrhage and no need for the use of elastic ligatures or other means for constricting the neck of the tumour; and (5) the patients suffer no more pain or inconvenience after the operation than after an ordinary ovariotomy. There is no dragging on the stump, and the abdominal wound is not dragged in afterwards as in those cases which have been treated by the serre-nœud.—The PRESIDENT thanked Mr. Jessett in the name of the society for his valuable and interesting paper.—Dr. PURCELL said the chief difference between Mr. Jessett's method and that of Martin of Berlin was that the former opened the vagina from above, while the latter worked from below. He called attention to the great advantage of Trendelenberg's position for this operation.—Dr. HEYWOOD SMITH testified also to the convenience of Trendelenberg's position. He asked Mr. Jessett whether an ordinary glass speculum would not answer as well as the special one as a guide for opening into the vagina, and also what was the special indication for a drainage-tube in these cases.—Mr. TAYLOR expressed his indebtedness to Mr. Jessett for the work he had done. It seemed to him, however, that no one method could be of general application; for instance, there were cases where the inversion of the broad ligaments would answer as well as the formation of anterior and posterior flaps. Dr. Purcell was mistaken in supposing that Martin always adopted one method.—Dr. BANTOCK said Mr. Taylor had in great measure expressed his own ideas. The operation in future would rest between

extra-peritoneal treatment of the stump and total extirpation.—After some remarks by Dr. LEITH NAPIER, Mr. JESSETT replied.

Mr. E. TENISON COLLINS (Cardiff) showed a very large Spleen removed post mortem. During life it was thought to be an ovarian tumour. Abdominal section showed its true nature. The medical attendant who was present would not sanction its removal, so the abdomen was closed without proceeding further. The patient, however, died the same evening from shock. No hæmorrhage was found at the necropsy.—Dr. HEYWOOD SMITH had lately had a case sent to him as an ovarian tumour, but examination showed it to be the spleen. He asked Mr. Bland Sutton to see it with him. Mr. Sutton advised removal and performed the operation. The patient made a good recovery.—Mr. H. B. GARDNER and Mr. J. W. TAYLOR spoke on the subject, and Mr. COLLINS replied.

Mr. J. W. TAYLOR (Birmingham) showed a large Uterine Myoma removed by Abdominal Pan-hysterectomy. Operation was urgently required on account of hæmorrhage. The shape of the tumour rendered the use of the clamp impossible or dangerous, and oöphorectomy would have been useless. He decided upon total extirpation. After separation of the tumour laterally by ligatures placed outside the ovaries and tubes, the bladder was dissected off anteriorly and the vagina was opened anteriorly and posteriorly. The remaining attachments were temporarily clamped whilst the tumour was lifted out. The patient did well and was discharged three weeks after the operation.

Mr. R. H. HODGSON showed a specimen of a large and partially solid Ovarian Tumour. The evacuated fluid portions measured three quarts and the remaining solids weighed four pounds. The patient made a good recovery.

NORTH LONDON MEDICAL AND CHIRURGICAL SOCIETY.

The Pathology of Certain Forms of Vesical Tumour.

A MEETING of this society was held on Oct. 10th at the Great Northern Central Hospital, the President, Mr. CHARLES KING, in the chair.

An address was given by Mr. J. H. TARGETT on the Pathology of Certain Forms of Vesical Tumour, which was copiously illustrated throughout by lantern slides prepared from photographs of the actual specimens. Mr. Targett discussed in the course of a most valuable address, not only the pathological appearances of the forms of tumour selected for the demonstration, but also their clinical recognition and modes of treatment. The first group of preparations illustrated the appearances of certain large single sacculi connected with the urinary bladder by narrow orifices. Much interest was especially taken in the description of sacculi occurring at the lower part of the bladder in the region of the trigone and probably the result of failure in the proper development of this region. Methods for the recognition of these sacculi during life were suggested, and the complications which arise owing to their growth were referred to. In certain cases the possibility of their removal was discussed, and operation was considered to be advisable by the speaker. The second variety of tumour brought forward was the recto-vesical hydatid cyst. It was shown that the cyst originated in close relation with the bladder walls, in fact in the muscular or fibrous coats, and that, therefore, the usual statement made in the text-books that they were found in the pelvis, having gravitated from the liver or some other situation in the abdominal cavity, was quite erroneous. The operative treatment adopted by Mr. Bond for this class of tumour was recommended and explained. The remaining preparations dealt with some of the important forms assumed by solid tumours of this region and the complications that they may bring in their train. Some exceptionally beautiful preparations were shown of the villous papilloma with all the epithelium *in situ*. In connexion with these the speaker mentioned the difficulty of recognising shreds of such papillomata in the urinary excretion. The most that might be expected to be observed was the very delicate fibrous strand forming the "core" of one of the villous processes. Even should this be found the diagnosis as to whether the tumour was malignant or not was in no degree advanced, for such a complication as the occurrence of an apparently benign villous growth covering or depending from a carcinoma is at times met with. The modes of extension of malignant growths formed a very interesting section of the demonstration. The last subject touched on was the possibility of the ureters becoming prolapsed and simulating polypi.

NORTH-WEST LONDON CLINICAL SOCIETY.

Exhibition of Cases.—Demonstration of Apparatus.

A CLINICAL meeting of this society was held on Oct. 16th, Dr. W. K. SIBLEY being in the chair.—Mr. JACKSON CLARKE showed a case of Aural Polypus successfully treated by the Application of Alcohol.—Dr. SIBLEY exhibited a case of Exophthalmic Goitre treated with Suprarenal Extract, and one of Abdominal Aneurysm.—Dr. CAGNEY showed a child with Infantile Paralysis in whose case energetic treatment in the acute stage was successful.—Mr. JACKSON CLARKE showed a patient in whom he had effected Perineal Drainage for the relief of Cystitis, and Mr. C. P. ALLEN exhibited some cases of dermatological interest.—Dr. Boulting, Dr. Bulger, Mr. C. G. Brodie, Dr. Campbell, and Dr. Herschell discussed the cases.

Dr. HARRY CAMPBELL gave an experimental demonstration of the Pulse and Arterial Tension with an apparatus which he had devised.

LIVERPOOL MEDICAL INSTITUTION.

Villous Tumour of the Rectum.—Chronic Hydrocephalus, Trephining, Recovery.—Latent Congenital Syphilis.—Exophthalmic Goitre, with special reference to the Thyroid Theory of the Disease and the Treatment of the Affection by Operation.

AN ordinary meeting of this society was held on Oct. 17th, Dr. WARBURTON, Vice-President, being in the chair.

Mr. PAUL related the case of a woman aged fifty-six years from whom he had removed a very large Villous Papilloma of the Rectum. Symptoms of bearing down, a constant desire to defecate, and the passage of blood and mucus had existed for five years. The growth formed a broad band two to three inches deep around the rectum about two inches and a half from the anus. The patient made a slow but otherwise good recovery. The tumour had the typical structure of villous papilloma and did not infiltrate the submucous tissue. The origin of the growth could be distinctly traced to the neck of Lieberkühn's follicles, and Mr. Paul suggested that the histological distinction between the three usual neoplasms in this situation was as follows. Papilloma commenced as an upward growth of the neck of the glands, polypoid adenoma as an overgrowth of the entire glands, and carcinoma as a downward growth of the deep portion of the follicles.—Mr. RUSHTON PARKER agreed with Mr. Paul that a purely villous papilloma was not likely to become malignant. No doubt it was an extremely rare disease in the rectum, but the patient having recovered well from the operation was probably entirely freed from her disease.

Mr. THELWALL THOMAS showed a young man nineteen years of age on whom he had operated six months ago. The case had been transferred from Dr. Glynn's wards. There was a history of very severe and increasing headache, chiefly occipital, for eighteen months, extreme giddiness and ataxia, with falling to the right side. There were nystagmus, diplopia, paralysis of the right superior oblique, and marked double optic neuritis. The circumference of the head was twenty-five inches. The right cerebellar fossa was opened and the tense, non-pulsating dura mater bulged; this was opened and then the brain bulged. By exploring with the finger no tumour could be made out, but the space under the cerebellum was closed by a membrane; this was easily broken through with the finger and a quantity of clear fluid liberated. The medulla and floor of the fourth ventricle were distinctly felt. The bone was not replaced. The headache soon disappeared, and the man quickly regained all his faculties and was now apparently quite well, six months having elapsed since the operation.—Dr. GLYNN, when he suggested operation to Mr. Thomas, thought the case was one of cerebellar tumour. The patient was nearly blind at the time of the operation. It was remarkable that it should not only have been followed by temporary relief but by permanent recovery. It was possible that a posterior meningitis had been followed by adhesions between the membranes in the neighbourhood of the fourth ventricle, and so caused

chronic hydrocephalus. — Mr. RUSHTON PARKER, Mr. MURRAY, and Mr. LARKIN also made remarks, the latter two speakers suggesting that it probably was a case of cystic tumour in the cerebellum.

Dr. STOPFORD TAYLOR showed a case of Congenital Syphilis in a man aged twenty-four years. It began about four years ago as a sore on the upper lip, and this, slowly spreading, involved both cheeks, the left eyelid, the left half of the scalp, and the alveolus of the upper jaw; the nose also was completely destroyed. His present condition was best described as syphilitic lupus.

Dr. ABRAM read a paper on Exophthalmic Goitre, with special reference to the Thyroid Theory of the Disease and the Treatment of the Affection by Operation. A short description of the symptoms was given, followed by a critical examination of the various theories advanced to explain the disease. The thyroid theory was held to be the most satisfactory. Two operations—namely, partial thyroidectomy and ligature of the thyroid arteries—were thought to fulfil the conditions necessary for the relief or cure of the disease. —Dr. GLYNN was very interested in the paper, though he did not accept many of Dr. Abram's contentions. He was quite sure that mental shock was an exciting cause. He thought that many cases recovered perfectly well under medical treatment.—Dr. CARTER thought that where it was clearly indicated that the thyroid was the seat of the disease operation might do good; but he was sure that there must be many other causes for the disease besides excessive thyroid secretion.—Dr. CATON said that in future in severe cases he should recommend removal of a portion of the thyroid gland.—Mr. PAUL said he had operated on two cases for Dr. Barron. The first was only moderately severe; here he divided the thyroid isthmus. There was no immediate improvement, but later Dr. Barron reported that the case was much benefited. The second operation he performed ten days ago; this was a most severe case, and the entire right lobe, which weighed two and a half ounces, was removed. No difficulty was met with in the operation, and the bleeding was less than in the case of large adenomata. The change in the patient was most remarkable; in three days the remaining half of the thyroid was not visible, the temperature and pulse had fallen, and the exophthalmus was receding.—Dr. BRADSHAW had tried the prolonged application of an icebag to the thyroid, and also counter-irritation with red oxide of mercury ointment, but without benefit in either instance.—Mr. GEORGE HAMILTON said that in many cases goitres could not be operated upon owing to the enormous vessels and sinuses present. He spoke of a case where the whole neck pulsated violently, and the isthmus extended from the cricoid cartilage to below the upper part of the sternum; when cut down on this was found to contain large vessels like those of a cricoid aneurysm.—Dr. BUCHANAN said that the fact that the symptoms following artificial removal of the thyroid, excessive administration of thyroid extract, and the pathological atrophy of the gland seen in myxœdema so much resembled the symptoms of exophthalmic goitre strongly supported the view that this disease was the result of over-activity and excessive secretion of the thyroid gland. — Dr. LOGAN, Dr. DAVIES, Dr. GIVEN, and Dr. SHERRINGTON also took part in the discussion.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

President's Address.

A MEETING of this society was held on Oct. 10th, the President, Dr. PORTER, being in the chair.

Dr. PORTER, in his address, dealt with many of the ethical questions now agitating the profession. In reference to medical etiquette he said that it was very desirable that certain canons or broad principles should be laid down decisively, and everyone entering the profession should be required to subscribe to them. Upon such a foundation a simpler and more natural system of ethics would erect itself. He then dwelt at some length upon the necessity for a more representative form of government in the profession on similar lines to the Incorporated Law Society. He also advocated very strongly the adoption of the "one-portal" principle, both as regards the entrance examination and the tests of professional fitness. There would then be no necessity for the representation of the universities and licensing bodies, as such, upon the governing body of the profession. They would then simply confer their titles on their own terms upon those who were already qualified medical practitioners. He believed, too, that one uniform standard of examination would tend to exclude some undesirable candidates for admission to the profession. Dr. Porter then touched upon the question of the abuse of medical charities, advocating a more searching inquiry on the part of hospital authorities into the circumstances of those who presented themselves as out-patients, and suggesting that in some cases the exaction of a small charge might be advisable, though he was not in favour of admitting cases indiscriminately as paying patients. State support or State aid he was not in favour of, but thought that registration and periodical Government inspection of all hospitals, dispensaries, and similar institutions would have a very salutary effect, especially if this was accompanied by the power to close all such institutions as were considered unnecessary or administered in an improper manner. He considered that the State had a duty to perform in preventing institutions which were conducted for private and personal ends being falsely marked with a title which was calculated to deceive the public and divert support from more deserving objects. The address concluded with some remarks on the national importance of medical education and the public side of medical work, and allusion was made to the very inadequate acknowledgment on the part of the public of their indebtedness to the medical profession as a body.

Reviews and Notices of Books.

Text-book of Operative Surgery. By Dr. THEODOR KOCHER, Professor of Surgery and Director of the Surgical Clinic in the University of Berne. Translated from the Second Revised and Enlarged German Edition, by HAROLD J. STILES, M.B., F.R.C.S. Edin., Senior Demonstrator of Surgery in the University of Edinburgh, &c. With 185 Illustrations. London: Adam and Charles Black. 1895.

THE Surgical Clinic at Berne, under the superintendence of Dr. Kocher, has for many years been one of the chief centres of surgical activity and progress on the Continent. Any work on operative surgery coming from such a source ought to command the attention of surgeons, and they will find this text-book full of interest. The book contains much that is new to British surgeons and is full of valuable suggestions, and no operator can fail to gain from its careful study. But it is essentially a work for surgeons rather than for students. Compared with the guides to operative surgery with which the British student is familiar, this work is markedly lacking in those numerous details attention to which is absolutely necessary for success. A knowledge of these is taken for granted by Dr. Kocher: he has written for those who are personally and practically familiar with the details of operating, and in many cases has sketched in outline only difficult and elaborate surgical procedures. For the practised surgeon this is an advantage, but it renders the work of less use for the student. The illustrations are numerous, accurate, and drawn on a large scale, and are a noteworthy feature of the work. Dr. Stiles has done his work of translation admirably; we are able to read Dr. Kocher speaking to us in good idiomatic English.

Diphtheria and its Associates. By LENNOX BROWNE, F.R.C.S. Edin. London: Baillière, Tindall, and Cox. 1895. pp. 260. Price 16*s*.

THERE can be no doubt that in respect to diphtheria scientific opinion is undergoing a marked change; for, although there are many inexplicable facts in its etiology which require to be harmonised, and although its affinities with other diseases are more numerous than was formerly conceived, the discovery of the bacillus diphtheriæ and the proofs of its pathogenic character have done much to lend accuracy to its definition. At the same time bacteriological studies have rendered the subject more complex,

since they have largely added to the class of cases which bear a close resemblance in their clinical features to the specific disease and yet on the bacteriological test are shown to be not of its kindred. The author of this timely treatise does not hesitate to meet this problem in the most critical spirit, and he has succeeded in bringing into prominent relief the new light which bacteriology has shed on the question. It is probably too soon as yet to admit that the whole truth has been attained, and it is more than likely that many of the opinions founded on bacteriology will require modification in the future; but, as marking the standpoint at present reached, and as an endeavour to clearly expound this, his work is creditable and worthy of commendation. Starting from the definition that "diphtheria is an infectious disease due to the presence of a specific micro-organism (the Klebs-Loeffler bacillus)," he goes on to point out that this may occur in a pure or simple form, and in a complex form from the mingling of cocci with the specific bacillus—that there are forms in which the latter is absent (pseudo-diphtheria), and others in which a bacillus closely resembling it, but shorn of virulence, the chief factor. He further states that these etiologically distinct affections resemble one another in the type of inflammatory changes which are known as diphtheritic, that in all but the "false" form there is evidence of general systemic intoxication, whilst the concomitant phlegmonous and pyæmic processes, depending doubtless on the coccal invasions, may occur with equal intensity in every one of the varieties. When in subsequent pages he comes to deal with the subject of bacteriological diagnosis it will be found, doubtless to the surprise of many practitioners, that there is room for the differentiation of no fewer than twelve varieties of membranous sore-throat; but it will be reassuring to learn that only a small proportion of these are wholly dissociated from true bacillary diphtheria, and that clinical diagnosis is more often than not confirmed by the bacteriological test. Although it is of moment in prognosis, the specific or non-specific character of the inflammatory membranous exudation does not lead to material alteration in treatment, saving only as to the use of antitoxin, and this, be it noted, has to be administered as early as possible, before even time has allowed of the application of the bacteriological test, if the remedy is to exert its powers most fruitfully. In an appendix to the book the author submits the antitoxin method to a searching criticism, contrasting for this purpose two series of 100 cases of diphtheria treated at the same institution with and without antitoxin. In each series there were twenty-seven deaths, which he points out is almost exactly the average mortality from diphtheria in this country. It must, however, be objected that a thorough comparison of this character requires very complete information regarding the individual cases before a remedy appropriate only to bacillary diphtheria can be discarded. We believe that on both sides of this question there has been too much haste in drawing conclusions. Taken as a whole, this monograph is one which gives a succinct and interesting account of the disease of which it treats. The chapters on etiology and diagnosis are well planned and highly interesting. More might with advantage have been said upon the morbid anatomy, and we failed to find mention of the remarkable histological studies of Oertel, which afforded presumptive proof of the action of a systemic poison some years prior to the demonstration of the toxine. The author's advice to resort more often to laryngoscopic examination is hard to follow; his preference for lactic acid as a topical application and for biniodide over the perchloride of mercury, his description of intubation, and many another practical point will be of service to practitioners. The work, which is enriched by numerous admirably executed coloured drawings by the author, and micro-photographs of the microbes found in the different forms of the disease, will, as we have already indicated, take a prominent place in the literature of the subject, although in certain directions—e.g., that of diphtherial paralysis—it might with advantage be expanded. A word of praise is also due to the typography and production of the book, which could hardly be excelled.

Diseases of the Joints and Spine. By HOWARD MARSH, F.R.C.S. Eng., Surgeon to, and Lecturer on Surgery at, St. Bartholomew's Hospital; Consulting Surgeon to the Hospital for Sick Children, Great Ormond-street. New and Revised Edition, with 79 Illustrations. London: Cassell and Co. 1895. Price 12*s.* 6*d.*

THIS volume is one of Messrs. Cassell's series of clinical manuals, and the reader must therefore expect to have the subject dealt with from a clinical rather than a pathological standpoint. Such is the case, and the work is very largely—indeed, almost entirely—the outcome of Mr. Howard Marsh's personal clinical experience. Of pathology, of course, we read, but this is by no means an especial feature of the book. Mr. Marsh has for years taken great interest in this department of surgery and has had great experience in the more conservative methods of treatment employed. He has taken a very useful part in combating views which have from time to time been advanced advocating very general resort to operation in the early stage of tuberculous disease of joints. The line Mr. Marsh has taken is stated very fully and with some amount of reiteration in this volume. We think something would have been gained by better classification of the subjects dealt with and by the exercise of more method. The various operations mentioned might perhaps with advantage have been described with more detail. The book impresses us, however, as being full of the results of a large and ripe experience.

LIBRARY TABLE.

The Stark Munro Letters. By A. CONAN DOYLE, M.D., M.S. Edin. London: Longmans, Green, and Co. 1895. Price 6*s.*—We like Dr. Doyle better as the romanticist or the Boswell of Sherlock Holmes than in his present *rôle* of literary executor. The book, perhaps from its being made up of letters, is scrappy and *décousu*. Dr. Stark Munro's theological disquisitions are intolerably dull—as dull and pompous as those in "Hypatia" or "Julian Home"—and if these are not dull where shall dulness be found? But if the reader skips these and passes on to the pages which recount the doings of the immortal Cullingworth, for immortal he surely will be, we can promise him a rich treat. Cullingworth's really great-mindedness curiously mingled with pettiness, his sound wisdom, his charlatanry, his dash of megalomania—to use the modern jargon,—all these make him one of the most memorable characters in fiction. His walk home from his surgery through the "doctors' quarter," the while he holds at arm's-length the bag full of fees, is real comedy. By the way, we should have thought that Dr. Doyle, being a man of medicine as well as a man of letters, would have been careful to select a name which could by no possibility be likely to give pain. It seems strange that he was unaware that there is in London a well-known consultant bearing this not very common surname. For the rest, the difficulties and disappointments which every young medical man will meet with in starting practice are well described, and Dr. Doyle might do worse than reprint the work in a cheap form without the theology, and get medical schools to distribute it to deserving students as an example of how, and how not, to run a practice.

Perfect Womanhood. By FREDERICK JAMES GANT, F.R.C.S. Eng. London: Digby, Long, and Co. 1895. Price 3*s.* 6*d.*—We can confidently recommend this book to anyone who is satiated with the modern woman as portrayed in the modern

novel. Here he will find no woman with "views." Sister Eva, Violette, and Lady Teresa, it is true, look at life from different standpoints; they are all beautiful and eminently genteel, and more or less theologically sound, though we are afraid that the story of the Resurrection as written by Sister Eva would not be accepted by the School Board. The work is dedicated to Princess Helena.

Clinical Lectures on Subjects connected with Medicine and Surgery. By various German Authors. Third Series. London: The New Sydenham Society. 1894.—This volume of the New Sydenham Society contains translations of eleven German clinical lectures, each one of which repays careful study in the original. The first is by the late Professor Th. Billroth, three are by Professor Ziemssen, and one is by Dr. Erb—these alone would make the volume notable. These and all the other lectures are valuable, and the volume is worthy to rank in the excellent series published by this society. We must, however, suggest to the authorities that they should exercise greater care in the translations from the German than is shown in some of these lectures. We have come across passages which are barely comprehensible, and much that is not English—at the best German English. We are accustomed to such good work from the New Sydenham Society that we are surprised that this volume bears marks of poor translation.

Elements of Practical Medicine. By ALFRED H. CARTER, M.D. Lond. London: H. K. Lewis. 1895. 10*s*.—The popularity of Dr. Carter's book is indisputably shown by the fact that it has reached its seventh edition. It is intended as an introduction to a more extensive study of medicine, and as such cannot fail to be a help to beginners. It is not, like so many smaller text-books, a simple mass of unconnected facts, but the broad principles of the different diseases are presented to the student in a form which is pleasant to read and easily assimilated. In this edition the part dealing with diseases of the skin has been written by Mr. Malcolm Morris. At the end of the book is an index of therapeutics which includes many examples of standard prescriptions which will afford a guide to the student for future work and his own modifications, which can only be made as his experience extends. There is no doubt that the present edition will obtain all the popularity of the former ones.

The Lumleian Lectures on Certain Points in the Etiology of Disease. By P. H. PYE-SMITH, M.D., F.R.S. London: J. & A. Churchill. 1895. 7*s*. 6*d*.—The Lumleian Lectures on the Etiology of Disease were delivered by Dr. Pye-Smith in 1892 and form one of the most carefully considered *résumés*, combined with a rare amount of original observation, now to be found in medical literature, and the medical profession will welcome a reprint of the same in book form. A long notice of the work is not necessary, as the lectures were commented on soon after their delivery. In the first lecture Dr. Pye-Smith considers the natural history of disease, external causes, effect of cold, contagion, and the invasion of bacteria and animal parasites. The section on the physiological origin of diseases embraces a large and important group of diseases, having their cause in physiological disturbance, gradually becoming more frequent, and ending in permanent structural disease, such as repeated errors in diet, both as regards its nature and the mode of taking meals, habitual constipation, overwork, mental and physical, &c. In the second lecture the author draws especial attention to the statistical method of inquiry and remarks that statistics, to be of value, must be taken without selection, designed or unintentional, and must be made in sufficient number to compensate for accidents. In the third lecture the special etiology of various diseases is considered, groups of disorders being taken in turn. Added to the lectures are the Harveian Oration for 1893 and a Memoir of the Life and Works of Harvey taken from the author's article in the ninth edition of the Encyclopædia Britannica.

Remote Consequences of Injuries of Nerves and their Treatment. By JOHN K. MITCHELL, M.D. Philadelphia: Lea, Brothers and Co. 1895. 240 pp.—War, with all its attendant horrors, has in many cases brought about indirect results which have been of the greatest utility. A conspicuous instance of such indirect benefits is the addition to our knowledge of injuries and diseases of nerve trunks by the brilliant observations and writings of Keen, Morehouse, and Weir Mitchell whose names will be for all time connected with the subject. A quarter of a century has passed since these observations were published, and the happy idea has occurred to Dr. J. K. Mitchell to follow up the cases which were treated by his father and others during and after the war. With great patience and industry he has ascertained the present condition of about fifty patients who had been treated for contusion, laceration, or complete division of nerves. He has grouped the cases together, and with each group gives a general account of the symptoms persisting and then furnishes the actual notes of the cases. He discusses in a special chapter the regeneration of nerves, and concludes with a chapter on treatment. The number in whom definite symptoms have persisted, even where the original lesion was slight, is very striking. These effects were chiefly pain, intolerance of heat or cold, or of both, trophic changes, especially thinning of the nails and ulceration round them, glossy skin, and in one or two cases increased growth on the side affected. The book is one of interest and will be read with great delight by those who have been inspired by Dr. Weir Mitchell's "Injuries of Nerves," and it can be strongly recommended to all interested in neurology as containing a fund of information which it would be difficult to find elsewhere.

New Inventions.

THE NIGHTINGALE JACKET.

WE have had brought to our notice a new invalid jacket—the Nightingale jacket—which is manufactured by the Jaeger Company and is on sale at their Charing-cross branch, 456, West Strand. The jacket is made of undyed camel hair and is very light and warm, and in addition to these, the main requisites of a wrap for the sick-room, it can be very easily put on, for there are no regular sleeves, only an abundance of stuff which can be wrapped round the arms and secured there by buttons at the wrists. The material is pretty as well as cosy and soft, and the price is moderate, so that we have no hesitation in cordially recommending this little sick-room comfort to the attention of our readers. In their well-known undyed woollen materials the Jaeger Company have also some new wares to display, including some pure woollen sheets which might be grateful to the rheumatic patient and the sufferers from torpid circulation.

THE OPTOMETER.

THIS instrument is a simple and handy means of testing the vision and of determining the number of the glasses required. It consists of a brass stand about twenty inches in height, which supports a disc a little more than one foot in diameter, capable of rotation on an axis, the periphery of which is perforated and carries sixteen spherical lenses numbered respectively + 1, + 2, + 3, + 4, + 5, + 6, + 7, and + 8 D, and − 1, − 2, − 3, − 4, − 5, − 6, − 7, and − 8 D. Projecting from the disc there is an arm with a clip supporting a card of test types and an astigmatic clock. The arm admits of being shortened or lengthened by sliding within a tube, the distance being fixed by a screw. Between the disc and the card there is a quadrant with four perforations carrying + 0·25, + 0·5, + 0·75, and a + and − 8. The vision is tested by looking at the card through one of the glasses, that one being selected which gives the best vision, slight differences betweeen the whole numbers being determined with glasses in the quadrant. The glasses enable the refraction to be determined of all cases from − 18 to + 18 D. The instrument is made by the Optical Institute of London, 89, Hatton-garden, E C.

THE LANCET.

LONDON: SATURDAY, OCTOBER 26, 1895.

YEAR by year on the festival of the Physician Apostle is held the solemn commemoration of the benefactors of the Royal College of Physicians of London, a commemoration founded by him who was at once a benefactor not only of the College but of the whole human race. And so it has come to pass that the commemorative oration is less a memorial of benefactors in general than of him who founded and endowed the occasion, the immortal WILLIAM HARVEY. Dr. CHURCH, the orator for the present year, physician, as he himself remarked, "to the great hospital with which HARVEY was so long connected," took for his subject HARVEY and the Rise of Physiology in England. Before the time of HARVEY physiology was in practically the same state as it had been in the time of ARISTOTLE; but HARVEY, with his rare scientific foresight, marshalled the scanty facts supplied by the work of his predecessors, and, adding to them the result of his own patient and laborious work, placed physiology upon a really sound basis. Having proved as far as possible with the means at his disposal the circulation of the blood, he turned his attention, to quote Dr. CHURCH, "to the problem of the maintenance of the bodily heat, and disproved the accepted doctrine that the heart was the source of heat." His immediate successors, LOWER and MAYOW, carried on his researches into respiration and circulation, and though, of course, oxygen was unknown to them, showed that the colour of arterial blood was dependent on the presence of air, and accurately described the mechanism of respiration. But so slow is the course of real knowledge that even we, in our day, are perhaps more uncertain as to the means by which animal heat is maintained than we are with regard to the means by which the solar heat is kept up.

It is a common and pathetic fact that great discoverers, in whatever field, are rarely allowed to see the benefits which eventually arise from their labours, and HARVEY was no exception. AUBREY tells us that he had heard him say "that after his book on the circulation of the blood came out he fell mightily in his practice, and was believed by the vulgar that he was crack-brained, and all the physitians were against him." Dr. CHURCH exemplified this when he pointed out that HARVEY'S researches had little or no immediate effect on medicine, even SYDENHAM being uninfluenced by them, and went on to warn his hearers that while formerly physiology was a branch of medicine the positions are now reversed. "The brilliancy of modern discoveries and the vast increase of our knowledge may for a time react prejudicially on medicine. So vast is the range of subjects bearing on medicine, and so important does each appear to those best acquainted with them, that we are in danger of forgetting that the future life of the majority of those entering our profession is to be spent in ministering to the victims of accident or disease, and that SYDENHAM'S words 'the art of medicine can be properly learned only from its practice and exercise,' will always hold good"—a warning which closely corresponds with the words of Mr. MITCHELL BANKS in his recent address before the Yorkshire Medical College. "Much study," as the wise man said long ago, "is a weariness to the flesh and of making many books there is no end." The multiplicity of subjects which a student is now expected to get up prevent his applying his time to acquiring sound and accurate clinical experience. A knowledge of nucleo-albumins, toxins, and the properties of dimethyloxyquinizine is useful to an expert, but for the average practitioner it is of infinitely more value to be able to appreciate the difference between a presystolic and a systolic murmur, or to adhere to the canon that an indefinite continued fever ought to be treated on the assumption that it is enteric.

Dr. CHURCH concluded with a graceful tribute to PASTEUR, who, he said, would be placed side by side with HARVEY in the Temple of Fame. There is, indeed, much that is common between the two: both were earnest seekers after truth, in both their scientific knowledge served but to deepen their religion, both, to use the words which the older worker quoted, were fully conscious of the fact that—

> "Never yet hath anyone attained
> To such perfection but that time and place
> And use have brought addition to his knowledge
> Or made correction, or admonished him
> That he was ignorant of much which he
> Had thought he knew; or led him to reject
> What he had once esteemed of highest price."

THE past season has been somewhat notable for the number and fatality of mountaineering accidents. In both Switzerland and the Tyrol the casualties have been numerous and the loss of life and limb grave, and the question naturally arises whether one of the favourite sports of Englishmen is worth such a sacrifice. This question will be differently answered according to the varying points of view of those by whom it is propounded. The ardent mountaineer will allege that all noble sports involve an element of danger; that danger necessarily means occasional loss of life; that the disasters of mountaineering are few in comparison, say, with those of the hunting-field; and that they are in the main avoidable and due to rashness, carelessness, and wilful neglect of proper precautions. Others—and among these may even be reckoned many enthusiastic travellers—regard mountaineering as a senseless pursuit, devoid of any real motive or utility, and a wanton incurring of unjustifiable risks. The late Mr. FREEMAN, we are informed by his biographer, could not understand how any reasonable being could waste his time among the barrenness of ice and snow when he might be spending it amidst historic cities or famous battlefields. The late Dean STANLEY, one of the most persevering and enthusiastic of travellers confesses in his letters that to him the Alps were simply "huge lumps." The ancients, as is well known, saw no beauty in mountains, regarding them rather as barriers to be surmounted or bleak regions to be sedulously avoided, and, so far as we know, there is no instance of a Greek or Latin poet celebrating the delights of mountaineering. But a sport that annually engages the energies of multitudes of the hardiest and most

enterprising of English and German tourists is not to be summarily dismissed as absurd. It certainly possesses a singular attraction for many persons, and we do not think this attraction is difficult of comprehension. Pure air, magnificent scenery, healthful exercise, difficulties to be surmounted, dangers to be avoided, an end to be achieved—all these are involved in mountaineering and serve to explain its fascination.

In connexion with any sport the questions which arise are mainly three: Is it innocent? Is it enjoyable? Is it healthful? To expect a sport *quâ* sport to yield knowledge or gain is to regard it from the wrong point of view. *Dulce est desipere in loco;* we must all relax sometimes; and the arguments which are used against mountaineering would go far to condemn all forms of amusement. As regards the three questions which we have propounded, the answer to the first two is easy. Mountaineering is without doubt innocent, and in the judgment of its adherents it is inferior to no sport in point of enjoyment. The third question, which comes more directly within our province, admits of more debate. Can we regard mountaineering as in the main and for the mass of tourists a safe and healthful amusement? This is a question which cannot be answered without considerable reserves and qualifications. Mountaineering—by which we mean ascents of 10,000 or 12,000 feet and upwards—involves much strain and severe fatigue. The strain is first upon the muscular system; but it affects even more importantly the circulatory, respiratory, and nervous mechanisms. In some persons the heart seems to feel the tax most, in others the nervous system is chiefly affected. Palpitation and "mountain-sickness"—the latter in all probability a neurosis—are the two chief difficulties that beset the average mountaineer. It is clear from these considerations that mountaineering is not for everybody. There must be, first of all, a sound general physique, considerable endurance, and the capacity for prolonged and continuous effort. This goes without saying, and is so generally understood that weaklings usually steer clear of the higher peaks. But it is not at all so generally understood that a sound heart muscle—a well-developed and well-exercised myocardium—is indispensable for any considerable mountaineering feats. Hence any suspicion of structural heart disease is an absolute contra-indication for any such exploits. Further, the heart must be not only structurally sound, but well exercised and in good condition. Hence sedentary livers, who for eleven months in the year have no regular active exercise, should not employ their holiday month in mountaineering. Yachting or fishing will be much safer for such, and perhaps not less healthful. Many Alpine accidents have been the result of neglect of this very obvious rule. For similar reasons mountaineering should be eschewed by persons in middle life who have not acquired the requisite training in youth, and even those who in the heyday of their early prime delighted in the sport and enjoyed many a "crowded hour of glorious life" on some Alpine summit would do well to remember HORACE'S maxim regarding the ageing steed, and bid a timely adieu to exploits no longer suited to their years. A certain stability of the nervous system is indispensable for mountaineering, but it is difficult to say anything precise on this head. Neurotic individuals not only climb badly as a rule, but they do not benefit by the air above a certain moderate level. A certain coolness of nerve is a necessary qualification for the many ascents which involve actual danger—danger usually avoidable and seldom extreme, but not to be lightly encountered by those deficient in steadiness and self-control.

Many of the dangers of mountaineering which bulk largely in the popular imagination are either quite rare or easily avoided. Thus, snow-blindness is not at all of frequent occurrence, is almost confined to prolonged exposure to a blazing sun upon snowfields, and is usually successfully averted by the use of coloured spectacles. Bleeding from the nose and ears, which was described by the early explorers, is practically unknown—at least, to any serious extent—at the present day. Frostbite and sunburn, though not uncommon, are seldom severe. Perhaps the most frequent ground of attack upon mountaineering is its presumed perilousness. Accidents are, no doubt, frequent, but it is certainly true that for the most part they are avoidable. Their two most frequent causes are climbing without guides and climbing in bad weather, and these are quite indefensible errors. For an unpractised climber to essay a difficult peak without a guide is to court probable destruction, and climbing in bad weather is in every way to be reprehended. Impatience and neglect of well-established rules and indispensable precautions account for most Alpine accidents. For most, but not for all. There are some dangers of mountaineering which are in certain cases incalculable. Falling stones are a case in point, and avalanches occasionally occur in unusual localities, though, as a rule, their path is known and they can be easily avoided. But, as we have already said, a certain *quantum* of danger is inseparable from all noble sports, and this is true of mountaineering. It is sad that so gallant a climber as the late Mr. MUMMERY should leave his bones in some unknown spot among the Himalayas, but he lies amongst his beloved mountains, and who knows but that may have been the end which he would himself have chosen?

THE county of Dublin is about to institute an organisation for the isolation of infectious diseases, and the draft scheme has been prepared for submission to Parliament. It involves the formation of a board which in certain respects resembles the Metropolitan Asylums Board, the members of which are to be nominated by different bodies, including the corporation and the unions of Dublin. For the moment, however, we do not propose to discuss the scheme itself or the composition of the proposed board; we are rather concerned with the opposition which the scheme has met with from the Dublin Sanitary Association—an opposition which the promoters of the scheme appear to have heard of with astonishment. The opposition is assumed to have been organised at a very small meeting of the council of that Association; but, whether this be the case or not, the grounds of objection have been definitely set out, and they are worthy of consideration.

The first objection has to do with the probable cost of the scheme. But it is quite certain that, if it is right to remove infectious patients from the six or seven general hospitals and similar institutions in which such patients are now treated, this cannot be done except at some considerable

cost. The contention is that the cost would outweigh the probable beneficial effect upon the public health. This is a difficult matter for us to determine; but one thing is certain, and that is that in London and elsewhere it has been determined—and it has been decided as the result of prolonged experience—that it is worth incurring a considerable expenditure in order to gain the very end which is here in question. This objection, as applied to Dublin, is, however, at the best a mere surmise, and for more than one reason it is hardly worth discussion from a medical point of view.

The next objection implies that such isolation of the infectious fevers in separate institutions can only be necessary in the case of one disease—namely, small-pox, the infection of which has been proved to traverse "wide air spaces." This argument, however, altogether ignores the fact that other specific infections easily traverse the smaller air spaces comprised within one and the same institution, and that the abandonment of the practice of receiving scarlet fever and similar diseases in the general hospitals of London and elsewhere has been brought about as the result of the experience that such cases could not be received into the hospitals in question with safety to the other patients. It is not a fact that small-pox is alone in question here, and hence we cannot endorse the attitude of the Sanitary Association in this respect.

The third objection which has been formulated is to the effect that the proposed scheme would very injuriously affect the interests of the Medical School of Dublin by interfering with the teaching of the infectious fevers and of their treatment by the clinical physicians of the city, and that in this manner obstacles would be thrown in the way of students. This, we frankly admit, is a real objection. The removal of the infectious fevers from the London general hospitals has tended in the same direction; and in order to meet it as far as possible it has become necessary to require, as a condition to admission for examination for a diploma to practise, that every student should have had special tuition in this respect in a hospital especially set apart for the reception of fever patients. But the difficulty is not one that applies to Dublin alone, and we may be certain that the physicians and teachers in the London hospitals would never have consented to the removal from their hospitals of the majority of the fevers, so necessary for teaching purposes, had there not been some altogether overwhelming reason for submitting to it. That such reason existed is perfectly well known, and it is highly probable that its application is by no means limited to the English metropolis. It is suggested by the chairman of the Public Health Committee of Dublin that the resolution embodying this objection could only have been passed at a council meeting in which the medical element predominated. We know nothing as to this; but we can very well understand that such an objection would be especially appreciated by the teachers at the several hospitals. The only question is whether, in Dublin as elsewhere, the evil of reducing facilities for clinical teaching is not more than compensated for by advantages to the public and to other hospital patients, and whether it cannot be made good by other teaching arrangements.

The last objection is one which carries but little weight. It is that parents and friends would object to send their children and relatives to hospitals at a distance; for it is admitted that such hospitals must be outside the city of Dublin. The experience as to this is altogether overwhelming. The difficulty in question does arise at first when the scheme is new; but when towns and cities of the size of, or larger than, Dublin have organised proper infectious hospitals the demand for admission into them steadily increases. Some 70 per cent. of the admissions to such hospitals are children; and the percentage of patients at tender ages is, as a rule, steadily on the increase. The experience of the Metropolitan Asylums Board is to the effect that they cannot keep pace with the demands made on them by Londoners, notwithstanding the fact that they are every year obliged to go further afield in order to obtain hospital sites.

Reviewing the whole series of objections raised to the principle of providing separate hospitals for the reception and isolation of the infectious fevers in Dublin, we cannot but think that the Dublin Sanitary Association would do well to reconsider the matter in the light of the experience which is available before they finally take up an attitude of opposition to the scheme now before the city and county.

Annotations.

"Ne quid nimis."

THE METROPOLITAN HOSPITAL SUNDAY FUND.

THE subscriptions to the Metropolitan Hospital Sunday Fund have this year attained to a sum far in advance of any sum ever previously reached, and the result produced upon us is the same as that which the sight of the workhouse gruel produced upon Oliver Twist—we can only say (with due gratitude for what has been received), "Please, we want some more." And the combination of greed and gratitude is easily explained. For ten years the total sum received, while varying in its units, tens, and hundreds, had remained fairly constant in its thousands, and we had, in common with the officials of the Fund, begun to believe that the high-water mark was fixed at, say, £42,000. In good times the figure would rise, as in bad times it would fall, but this sum seemed to represent the amount which the public were prepared to give, though we have never allowed that it was quite the sum that should be expected, having regard to the size of the community and the undeniable excellence of the Fund. We had almost begun to believe that all efforts were required to bring the Fund to the point which it usually reached, and that much beyond that point it was useless to expect contributions, though a drop to much below that point might occur if the exertions of the supporters of the Fund were ever so little relaxed. The Fund, however, this year has reached the noble sum of £60,000—a leap by £15,000 in advance of the previous maximum sum. This striking proof that there is nothing constant about the figure to be expected, nothing stereotyped about the generosity of the public towards the support of our metropolitan hospitals, at once emboldens us to ask: If £60,000 this year, why not £70,000 another year? And it leads us also to look into the origin of the remarkable aggrandisement that has taken place in 1895, that we may learn its *rationale*, and apply, or assist in applying, similar methods on future occasions towards furthering the interests of a Fund whose object we have so much at heart, and with whose foundation and maintenance we can claim to have been so closely connected. The upward bound has certainly been due to the action of our contemporary the *Hospital*, a journal devoted to the

interests of our hospitals and asylums, which published this year a special appeal that resulted in securing subscriptions to the Fund amounting to no less than £18,000, and we heartily congratulate our contemporary, no less than the Fund, upon this splendid outcome of well-directed journalism. The sum so raised represents the increase of the year, for the collections in the churches and from the public at large by offertory and donation remain the same as before—hardly, indeed, reaching the figure we have set down as the decennial average. But the large sums received through Messrs. Burdett and Harris, and Messrs. Pym and Vaughan from the Stock Exchange, and the princely generosity of Mr. B. Barnato, Mr. D. Marks, "and other City friends"—as they modestly style themselves in their letter to Mr. Burdett—have raised the total of the Fund from its level, possibly becoming a dead level, to the splendid figure we have announced. And the source from which these huge donations were received suggests the method by which we must, one and all, attempt to keep the Fund in the position to which it has attained, and to avoid the retrogression that at the first glance may seem likely to occur. Mr. Burdett, the editor of the *Hospital*, is also Secretary to the Stock and Share Department of the Stock Exchange, and has been able to move that notoriously open-handed and open-hearted body of gentlemen to this extent, bringing to bear upon their sentiments and their purses the influence of personal and intimate knowledge. And this is the only way in which the Fund can be made to grow; we are not even certain that it is not the only way that it can be prevented from shrinking. Individual effort is wanted. Work ersare wanted, zealots and proselytisers. And if by chance these can be found among the men who direct the paths of journals with power among different classes, sects, and *coteries* the success of the Fund, which all allow should be unquestioned, will be assured.

UNQUALIFIED ASSISTANTS AND THEIR PRINCIPALS.

IN spite of the many warnings which practitioners have had of the danger of allowing unqualified assistants to do the most responsible part of their work, the evil still continues to call for the most anxious attention of all who represent either the public or the profession. The last case which has come under our notice is instructive on this subject—that of a carman's child seven weeks old, living in Walworth, one of twins. The other twin died at three weeks from birth. They were prematurely born. The report of the inquest on which we write is in the *Daily Telegraph* of Oct. 19th. We shall be glad if there should be any incorrectness in our version of the facts to have them corrected by the principal in the case. We gather that the unqualified assistant visited the mother in her confinement. She paid him the fee. She thought he was registered or would not have received his visits. She took the deceased child to him and he said it would not live the night. Apparently it lived some days after, but there does not seem to have been any record of the visit in the books or any attempt to have the child seen by the principal, who had to decline giving a certificate. In the case of the previous child the certificate was filled up by the unqualified assistant and signed by the principal. This confusion of duties and this use of the unqualified assistant as if he were a registered practitioner is very much to be deprecated. The deputy coroner, Mr. A. W. Wyatt, characterised it "as nothing short of a fraud on the public." He then said: "We coroners are powerless in the matter. The cases ought to be taken up by the Medical Society." We cannot help seeing some confusion of duties in these last remarks of the coroner. Why is it the duty of any medical society to take up such facts? Neither medical men nor societies exist to detect fraud on the public. On the other hand, coroners and their juries do exist to investigate the causes and the circumstances of uncertificated death. This is their very function; and it is for them to make such representations of fraud in medical attendance or in medical certification to the public authorities—the Home Office, the Registrar-General, and the General Medical Council. It is true that one or two Medical Defence Societies have, at considerable expense and trouble, brought facts of the sort disclosed in this case before the authorities. They were only relieving coroners and public prosecutors or the Registrar-General of some part of their duty. But they have been little thanked for it; and it would not surprise us to see them tire of work which should be done by others. Be this as it may, any practitioner who employs unqualified assistants to attend dying patients and allows them to pose as registered men is acting without due regard to his own interests and his own duty.

A BOARD OF GUARDIANS IN A DILEMMA.

WE alluded in THE LANCET of Oct. 5th (p. 869) to vaccination prosecutions and the report of the Royal Commission on Vaccination, and pointed out the injury which is being done by the delay of this report. The Wigan board of guardians had, owing to the prevalence of small-pox, passed a resolution that the vaccination officer should prosecute defaulters since Jan. 1st, 1895. As a consequence the anti-vaccinationists, not by any means a numerous body, were up in arms, held a public meeting, and passed the usual condemnatory resolutions in regard to vaccination, and called on the guardians to stay proceedings till the report of the Royal Commission on Vaccination was published. It was then found that when the previous resolution was passed the friends of the anti-vaccinationists on the board had been napping whilst the resolution was carried. At their meeting on Friday, Oct. 18th, a Mr. Prescott was called upon to move the following resolution, of which he had given notice—namely, "That the resolution of Aug. 23rd, 1895, passed by the board of guardians, authorising Mr. Robert Halliwell, the vaccination officer, to take proceedings against vaccination defaulters, be rescinded"—and in doing so spoke as to the cases of small-pox in the town, stating that none had occurred amongst the unvaccinated children, and that the Royal Commission had requested that all prosecutions should be withheld until their report was given. When the report was before them they could consider the question afresh. Mr. Southworth very sensibly remarked that he really could not understand why they should come there fortnight after fortnight simply to pass resolutions at one meeting and rescind them at another. One intelligent guardian stated that, as no cases of small-pox had occurred amongst the unvaccinated, "it seemed to him that if any summonses had to be issued they should be issued against those who had had their children vaccinated and thereby brought disease upon them." After a lot of empty discussion on the legality of the last resolution Mr. Clayton, an old guardian, made a most intelligent and effective speech. He remembered the resolution to stay all vaccination proceedings, but it was five or six years ago. It was a resolution that no prosecution should be taken until the Royal Commission had given their report. Since then there had been three changes of Government, and the Royal Commission had had to be appointed every time. He did not know whether they had been reappointed during the present Government, but it was evident that if they had to wait for the report of the Royal Commission they would have to wait a very long time. He was one of those who believed in vaccination, but he also believed in shaking hands with a man or woman even if he or she might happen to differ from him. When he was a young man the vaccination question was more talked about than it was in these days, for when they looked back on the history of the last hundred years and saw what had been done to overcome the terrible scourge

of small-pox they would see that now they were living in their own vineyard in comparison to the way their forefathers lived, and it had all come about simply through vaccination. At the present time the Wigan Sanatorium was full of small-pox cases, and in Aspull it was rampant, and they would stultify themselves as representatives of the ratepayers if they did not do their best in trying to continue the good work that their forefathers had done in keeping down the terrible scourge. When he went to school one child in every fifty was marked with small-pox, but it was seldom they saw one marked now. He would certainly vote against the resolution, for he believed that it was nothing but men having a few fads that had brought the question up again. Even if he had to stand by himself he would have his opinion the same as everyone else, and he would vote against the motion. Ultimately the motion was withdrawn, and the clerk was instructed to report at the next meeting on the resolution passed five or six years ago.

DEATHS UNDER CHLOROFORM.

IN the first case upon which we comment, which occurred on Sept. 11th, the patient was a woman aged fifty-four, who was admitted into the Greenwich Infirmary to undergo an abdominal section. She was carefully prepared for the operation. She was a chronic alcoholic, but physical examination revealed no organic disease. Chloroform was given from folded lint, the chin being supported by the ring finger and the little finger. Old iritis rendered the right pupil irregular; the left was observed to be small and to react to light. At first the patient held her breath, and there was some struggling. The pulse was watched, and was fairly strong and regular. Seven minutes after chloroform was commenced she ceased to talk, and conjunctival reflex went. The breathing was regular. The lint was now withdrawn and not reapplied. Immediately after this, before the operation was commenced, the breathing became stertorous and the face became livid. The tongue was now drawn forward and the chin further up, but the lividity increased, and, although artificial respiration was practised and venesection performed, the patient only gave five or six irregular respirations and then died. Inversion, cardiac acupuncture, nitrite of amyl inhalations, injections of strychnine and of ether were also tried. Two drachms of Duncan and Flockhart's chloroform were used, a little being dropped on either face of the lint alternately. The necropsy showed extensive fatty changes in the myocardium and engorgement of the viscera and meninges with dark fluid blood. The medical men present regarded the death as due to asphyxia, a conclusion which the details given above lead to. The reason for the overdose does not seem so clear. The use of lint is open to the objection that it is almost impossible to maintain an equable atmosphere of chloroform with it, as each time chloroform is dropped on the patient for the moment includes a higher percentage vapour. It is possible, if the chin had not been held up from the first stertor would have appeared earlier in the case, and so have given warning before the nerve centres had become so deeply narcotised. The name of the administrator of the chloroform is not stated. Another death is reported as having occurred under chloroform at the new Somerset Hospital, Cape Town. The patient, a man aged thirty, was admitted to have an operation performed on his finger. Chloroform was given by Dr. Hofmeyer, the assistant medical officer to the institution, after the patient's chest had been carefully examined. The operation was completed when the patient was noticed to be breathing badly. Half an ounce of chloroform was given from "a mask held near the face." The patient struggled a good deal in going under. When respiration grew embarrassed the pupils dilated and the face grew livid. The post-mortem appearances of fatty visceral changes were present. It was thought that the death was due to syncope. A battery was used over the precordial region and artificial respiration kept up for a time. This case resembles the one given above, and appears to be one of asphyxia—probably in each case the stage of struggling led to the intake of an overdose of chloroform. The third case we have already briefly noticed, but further particulars have since reached us through the courtesy of Mr. Richard Coates, the house surgeon at the Newport Infirmary. The patient, a man aged forty-seven, was admitted for the performance of a trivial operation on his finger. He had previously taken chloroform well for a similar operation. Having been duly prepared and physical examination showing him free from valvular disease of the heart, although the heart's action was weak, he was given chloroform by dropping it continuously on a towel rolled into a cone. The man was very nervous and apprehensive of the anæsthetic. After two minutes of inhalation he struggled, and an opisthotonic spasm occurred lasting half a minute. During this time no air entered the chest. When the spasm had passed, chloroform was again given, but with great caution. The breathing was now quiet, and the corneal reflex disappeared. The bandage was removed from the hand, when the man suddenly grew pale and then livid. The tongue was drawn forward, the mouth being kept open by the use of a gag, and the head depressed. Artificial respiration was commenced at once, and maintained for three-quarters of an hour, while nitrite of amyl inhalations were given. Air entered the chest freely; the pupils were of medium size, but no heart movements could be detected. About three drachms of Duncan and Flockhart's chloroform were used. Death was undoubtedly due, says Mr. Coates, to "primary heart failure." The heart muscle was found to be fatty. A death under chloroform is further reported from the Oldham Infirmary. The patient, a woman aged forty-three, was admitted to undergo excision of her right maxilla for the relief of cancer. The patient was examined and nothing found which was held to contraindicate the giving of chloroform. The gentleman who was acting as junior house surgeon, gave chloroform, first from lint and then through a nasal tube (catheter in nostril) attached to Junker's chloroform inhaler. Conjunctival reflex had disappeared when this change was effected. The operation was commenced, but the patient winced. The nasal tube was withdrawn and lint reapplied, but it was noticed that the patient had ceased to breath. Artificial respiration was carried on for forty minutes, and faradisation of the phrenic nerves and hypodermic injections were tried in vain. The coroner is reported to have said that while not depreciating the skill of the gentleman who gave the chloroform, he thought that in such cases an experienced surgeon should give the chloroform. Unquestionably this case is an instance of operation shock killing through an incomplete anæsthesia acting upon an enfeebled heart. The necropsy revealed marked fatty degeneration.

CAN CISTERNS BE DISPENSED WITH UNDER THE CONSTANT SERVICE?

THIS was the question which the metropolitan medical officers of health met to consider on the 11th inst., and which, despite the passing of a resolution by a small majority, was left practically unsettled. Dr. Dudfield had ascertained that cisterns were retained in Edinburgh and Liverpool, but were dispensed with or deemed unnecessary in Dublin, Glasgow, Manchester, and Birmingham, though he and Dr. Sykes, while they would have all draw-off taps affixed to the main, were of opinion that it would be unsafe to do so without a cistern for feeding the

water-waste preventers in closets, the kitchen boilers, and the hot water service. This, however, was but a side issue, the question being the necessity of some reserve in the event of interruption of the supply through scarcity of water, accident to the mains, or necessary repairs. The essential merit of the constant service is that it provides at all times pure cold water direct from the mains, without the chance of contamination incidental to imperfectly covered and mostly ill-placed cisterns, and the retention of the ordinary cistern completely neutralises this advantage. But, while the possible contingency of the deprivation of this necessity of health and comfort—which, in the absence of cisterns, follows the suspension of the supply even for a few hours — can be averted only by maintaining a reserve of water in the dwelling, the use of that which had been stored in a cistern resorted to only at long intervals would be worse than the evils of the old system, and it would be impossible to prevent such water from being employed for dietetic purposes, the most urgent of all. The best, if not the sole, solution of the difficulty would, we think, be found in the provision of a new form of cistern, capable of holding a quantity sufficient to tide over the interval, but so constructed as to exclude alike the possibility of the entrance of dirt and vermin, and the accumulation of any deposit from the water itself. These conditions would be fulfilled by a cylinder having its bottom in the form of an inverted cone, to the apex of which the service pipe should be connected, and the whole surmounted by a lid so fitted and sealed as to be practically air-tight save for a small air vent in the cover. A cylinder 2 ft. by 5 ft., with an additional foot for the cone, would hold 100 gallons, and, if 3 ft. in diameter, 230 gallons, without risk of overflowing. These quantities would allow from ten to twenty gallons per head for a large household, and would be supplied whenever, as was done in East London throughout the recent scarcity, the water was turned on for a couple of hours each day, while constant renewal would keep the water always fresh. At the same time a draw-off tap connected immediately with the rising main would furnish water for drinking purposes perfectly fresh, and in hot weather colder than that from the cistern, which, as well as all pipes, ought in every case to be fixed where they cannot be affected by frost. Nothing can be conceived more irrational or worse than the vast majority of cisterns fixed in the most absurd positions on or under roofs, under floors or ceilings, even in waterclosets, covered, if at all, with loosely fitting boards cut away for the entrance of the supply pipe (which might just as easily be soldered into the side), and nearly always difficult of access for inspection or cleaning.

PAST v. PRESENT METHODS OF TEACHING.

THE address of Mr. Mitchell Banks before the Yorkshire College Medical Students' Society upon present methods of teaching as compared with past may well cause many who read it to ask themselves, "Are we so much better than our forefathers?" We have no desire to pose as reactionaries, but we must agree with Mr. Banks that a modern medical student is required to get up an enormous mass of material which is absolutely useless to him in his profession. "Botany and zoology," said Mr. Banks, "I would cut clean out of the medical course." It is impossible for any student to learn thoroughly all the subjects he is supposed to learn. The medical curriculum now embraces as many subjects as the School Board teach, and the result in many cases is equally useless. The average student knows all about the nerve to the stapedius or the course of the pneumogastric, but he cannot or does not realise why dyspepsia simulates heart disease. He heaps together a quantity of dissimilar facts, but fails to draw any deduction from them. We remember being once asked by an enthusiastic and hard-working student: "Can you tell me the microscopic appearances of the lymphatics of the rectum in an early stage of carcinoma." Having confessed our ignorance, we showed the inquirer a well-marked Pott's fracture, and said, "What's this?" "Oh, that!" he said, "that's talipes equino-valgus." Now it is this kind of diagnosis that we fear modern methods have rather a tendency to produce. The knowledge may be there, but the art of applying it is wanting. We can only hope that Mr. Banks's address will go some way towards making modern education less theoretical and more practical.

FRENCH COLONIAL MORTALITY.

M. LAGNEAU, who is admitted to be a competent authority on the subject, has recently written an important article dealing with the sickness and mortality of French soldiers on foreign service, which has been published in *La France Militaire*. It seems that although the most ample sanitary statistics are issued regarding the land forces on duty in France itself, as well as in Algeria and Tunisia, there are no official documents whatever from which similar information can be obtained with reference to the remainder of the stations that are garrisoned by French troops, and inquirers seeking for enlightenment on this head are obliged to depend upon private sources of information. Under such circumstances it is naturally very hard to arrive at an exact appreciation of the actual state of affairs, and the complexity of the question is still further added to by the exceeding difficulty of ascertaining the ultimate fate of the numberless invalids who are sent to their homes on account of maladies contracted while abroad. In default of accurate figures, M. Lagneau, after considerable research, has satisfied himself of the approximate accuracy of the subjoined table, which represents the military mortality per 1000 of strength at the stations named:—

France	7·00
Algeria	11·16
Tunisia	12·20
New Caledonia	8·30
Martinique and Guadeloupe	50·00
Guiana	237·00
Tonkin	77·00
Cochin China	21·00
Réunion	29·00
Madagascar (1880)	75·00
Senegal	74·00

The following extracts from M. Lagneau's paper are interesting: "Madagascar, with which we are so occupied at present, is remarkably insalubrious. 'What an army corps,' exclaims M. Planchut, 'could we not form with the soldiers and marines who gradually, one by one, have been overthrown by fever?' Dr. Guiol, who remained four years at Nossi-Bé, where thirty-nine principal medical officers succeeded each other during forty years, has left it on record that the annual mortality amongst civilians is 89 per 1000, and amongst the military 75 per 1000—proportions which lose nothing of their gravity when we remember the numbers that are sent to die at Mauritius and Réunion. ..... The troops most affected by colonial residence are the marine infantry. Taking part in all the expeditions to unknown territories, occupying in a more or less permanent fashion the most unhealthy posts, these soldiers too often contract diseases to which they succumb either before or after their return to France. According to Dr. Lutaud, out of 1000 marines 18·9 die annually in France, 31·2 in Martinique, 34·5 in Guadeloupe, 140·6 in Senegal, 28·5 in Réunion, 28·1 in New Caledonia, and 97 in Cochin China. The average mortality in this branch of the military service would seem to be 70 per 1000

for the rank and file and 90 per 1000 for the officers." In conclusion, M. Lagneau eloquently calls for the regular publication of exhaustive information on all points that concern the health of the soldiers serving in foreign climes. "By the side of victories, of expeditions, of conquests, and of territorial acquisitions should appear the expenditure, the sacrifices, the victims entailed by these achievements. The nation which supplies the men, the Parliaments which decide for peace or war, the Governments which order the occupation of a district, the generals or admirals commanding the forces, all are interested in knowing the mortuary dime exacted by each war, each campaign, each territorial acquirement. For in our country, more rich than populous, it behoves us to be economical of human lives."

THE COUNTY COUNCIL AND THE LONDON WATER BILLS.

THE discussion at the meeting of the London County Council on Tuesday last on the question of the purchase of the undertakings of the London water companies took an important and interesting turn. It will be remembered, as was reported in our issue last week, that an amendment that the Bills for the purchase of the London water companies should be proceeded with, was lost by a majority of one only. This amendment was opposed to the recommendation of the Parliamentary Committee that the Council "do invite Her Majesty's Government either to deal with the question themselves or to appoint a Royal Commission to do so." This recommendation being approved by the small majority of 1, amounted to a decision not to proceed with the eight suspended water Bills. As, however, the Council have expressed a desire that they should be the water authorities for London, Dr. Collins proposed an amendment, on the debate being continued this week, that the matter should be referred to the Parliamentary Committee to report to the Council without delay the lines on which they suggest that the Government should be asked to legislate. This just and sensible proposal was carried by a majority of nine, so that in the event of the Government being asked to deal with the question they will, as Mr. J. Stuart, M.P., observed, at least have an outline presented to them of the course to be pursued. This, we hope, will lead to some very definite and distinct proposals being made, so that, after all, there is promise of the decision last week to abandon the Bills being annulled pending the report of the Parliamentary Committee.

INFANT CRIMINALS.

AN inquest was held recently by Mr. Troutbeck on the body of an infant four months old whose death was shown to have been caused by her little sister, three years old, who apparently from jealousy had stuffed the child's throat with paper. This must have been stuffed into the infant's pharynx with great force, as quite a large quantity was found lodged there when she was taken to Charing-cross Hospital. The child admitted that she had done it, and there seems to be very little doubt that she deliberately meant to get rid of an unwelcome rival. She had previously shown signs of jealousy, and had pinched the infant in a vindictive way and shown her feelings so decidedly that the mother seems to have had some misgiving as to the safety of leaving the two children together. This early development of jealousy and consequent spiteful conduct, and the expression of it in the form of deliberate murder by a child three years old, are fortunately rare. It is impossible from the facts adduced to say how far this may have been the outcome of a defective mental condition, and how far to absence of self-control traceable to faulty training or other circumstances of environment, but the case deserves to be pondered over by those who are responsible for the training and care of children. Much valuable work has been done by Baldwin, Preyer, and others on the physical and intellectual development of children, but their moral development is a field for research almost untilled. The development of the passions, the growth of self-control, and the way in which healthy development is modified or checked by environment or by physical health are subjects on which accurate observations are much needed. Further, in the case of children of tender years who, without regard for ulterior consequences, commit deeds that in older persons would be criminal it is most important to know what will be the future developments of character. It certainly does not indicate the same amount of inherent criminal tendency when an infant performs or attempts murderous acts as when an older boy or girl like the Plaistow lad deliberately kills another person. What is wanted is careful observation of a large number of children over many years. With a little coöperation much might be done in orphan schools, where children are received at a tender age and remain for some years. But a most fruitful field for investigation, the results of which would be of inestimable value to those who direct and organise education, is to be found in the ordinary private and public middle-class schools of the country. With the help of the medical officers of the schools forms might be devised so that the parents might give the necessary information as to the early moral as well as mental development of the children. This could be entered in a register, and every term the development of the boy or girl under observation could be added, with any striking instances in which particular moral traits had been exhibited. By such collective investigation much may be learned, and we may be able to judge from characteristics shown by a child in what way he will tend to develop, so that his education and his surroundings may be suitably selected. This need has made itself felt in the scholastic profession. The College of Preceptors has recently instituted a training college for masters of middle-class schools, and has arranged that one of the courses, given by a physician, shall include instruction in the observation of children with regard to the development of their faculties, both intellectual and moral. Such observations, carefully made and accurately recorded, cannot fail to produce extremely fruitful results, and it is to be hoped that the example of the College of Preceptors will be followed by other institutions which undertake the training of teachers.

LIQUID AIR, A COMMERCIAL COMMODITY.

TIME was when many of our present articles of commerce and trade were mere scientific curiosities such as only the research chemist was privileged to see, and even then under some difficulty. The tendency of the present age, however, is to turn every new scientific discovery to practical utility. Few could have anticipated the manufacture on a large scale of the complex organic compound benzoyl-sulphonic-imide, which is obtained after a long series of operations which at first were only of interest from a theoretical point of view; but yet saccharin, as it is better known, is now an important article of commerce, familiar to everybody as possessing many hundred times the sweetening power of cane sugar. Solid carbonic acid or carbonic acid snow, to give another example, was not long back viewed in comparatively small quantities with a feeling of awe and wonderment as an interesting specimen of the control which the chemist possessed over some of nature's forces. Now immense quantities of it are made chiefly for aerating beverages, and there are few of us who are not acquainted with the "steel tubes" which contain hundreds of gallons of the "liquid gas" which by the cold produced by its own

evaporation condenses to a beautiful white solid. Practically in the same way it is announced that liquid air is now being obtained in commercial quantities. It was only a few years ago that Professor Dewar produced liquid air in any substantial quantity by his ingenious device of a vacuum-jacketed vessel. The intense cold was effected by a series of operations in which liquids of increasingly lower freezing points were successively employed. For the manufacture of liquid air on the large scale which has recently commenced in Germany the employment of intermediate cooling agents has been dispensed with, the cooling effect being obtained by the rapid evaporation of the product itself. Apart from the production of a powerful refrigerating appliance, the process promises to become one of commercial importance, since as the stages in the liquefaction of the air advance it becomes richer in oxygen, until a gas is obtained containing 70 per cent. The oxygen may be further purified, if required, from the nitrogen, of which the gaseous balance, it is said, chiefly consists. As it is, however, the gas may be used in many commercial operations. We should very much like to know what becomes of the argon in this process. Perhaps at no very distant date we may come to speak of this newly discovered atmospheric constituent as an important by-product, for in dealing with the enormous volumes of air, as must be the case in the process just described, argon must be encountered in very considerable quantity, and we should not wonder if this newly known constituent of the atmosphere is eventually supplied to research students for simply the asking. As considerable obscurity still surrounds the nature of argon it is to be hoped that this new departure in manufacture may afford very distinct aid in clearing up these mysteries by placing at the disposal of investigators an unstinted supply of material. Then it would be a happy instance of science helping commerce and commerce in turn helping science.

SMALL-POX IN MANCHESTER IN 1892-94.

IN Dr. J. Niven's first annual report on the health of Manchester an interesting *résumé* of the behaviour of small-pox during the above years is given. Dr. Niven observes that when a case of this disease occurs at a common lodging-house in Manchester it is practically impossible to obtain the revaccination of the other inmates, and he doubts whether any fresh legal powers would enable it to be done. He considers that in times of small-pox prevalence the lodging-house keeper should be liable to prosecution for admitting any inmate unable to produce evidence of recent successful vaccination or revaccination sufficient for protection. Obviously this would require the laying down of some standard in the matter. Although Dr. Niven fully recognises the agency common lodging-houses play in the dissemination of small-pox, he is not inclined to attach too much importance to this means of conveyance, and he quotes from Dr. Tatham's last report on Manchester as illustrating this point: "Although this disease was prevalent through the year 1891 in many of the towns and districts of Lancashire and Yorkshire, the cases imported into Manchester during the year did not exceed two." As an instance where apparently tramps were responsible for the dissemination of small-pox in Manchester, Dr. Niven refers to the prevalence of the disease after June 1st of last year, which he considers was due to the movements of tramps through the city at the time of the Queen's visit, and in the same year there were eleven fresh reimportations of the disease. Five cases of small-pox occurred during 1894 among the fever patients at Monsall Hospital; and, in consequence of this and of the feeling that patients isolated for scarlet fever ought not to be subjected to the risks of contracting small-pox, acute cases of the latter disease were isolated at Clayton Vale Hospital. It was found necessary, however, to bring back the convalescent cases to Monsall, a proceeding which Dr. Niven believes to be free from danger to the other patients. The acute cases treated at Clayton Vale were smeared with carbolic acid in order to minimise the risks of aerial convection. In commenting upon the difficulty of diagnosing slight cases of small-pox, Dr. Niven observes that during 1894 no less than sixty-three cases were erroneously reported as small-pox, a fact which may be interpreted as meaning that the medical profession in Manchester has much trust in the sanitary authority, and does not, therefore, hesitate to report suspicious cases. Conversely, however, instances occurred where genuine cases of small-pox were not reported. Dr. Niven urges the authorities of the Manchester Medical School to take advantage of every opportunity afforded them of teaching the diagnosis of small-pox. Unfortunately, there are many students of medicine who leave hospital without having ever seen a case of small-pox, and the comparative rarity of the disease must render its practical demonstration in many instances impossible. Still, when opportunities offer they should be taken advantage of. Dr. Niven seems to have made it a practice to see each case prior to its removal to Clayton Hospital; in other words, he acted practically as a consultant in diagnosis. If all medical officers of health had had as extensive an experience of infectious disease as Dr. Niven has, perhaps the practice might be generally adopted with advantage. The figures supplied in the report before us in regard to the behaviour of the vaccinated and unvaccinated among the cases of small-pox treated in hospital during the years 1892-94 are interesting; they relate to 996 cases. At all ages the fatality rate among the vaccinated was 4·04 per cent., among the unvaccinated 26·47 per cent., and among the doubtful 13·21 per cent. The most noticeable feature among the age groups was the absence in the vaccinated of any death below fifteen years of age. Among the unvaccinated, on the other hand, the fatality rate from birth to five years was 32 per cent. and from five to fifteen years 20 per cent. From fifteen to twenty-five the fatality rate among the vaccinated was 0·76 per cent., as compared with 21·74 among the unvaccinated and 11·11 among the doubtful. From twenty-five to forty-five the respective percentages were 6·16, 31·25, and 21·05, and from forty-five to sixty-five 9·23, 100·0 (only two cases), and 9·09. Dr. Niven includes in this part of his report an excellent memorandum as regards the investigation of cases of small-pox for the guidance of his sanitary inspectors.

BOGUS PRACTICES.

THE *Sheffield Weekly Telegraph* in a recent number gives an interesting account of the way in which a medical man may be taken in when buying a practice. It pictures the smart sporting medico who sets up on credit in a fashionable country spot and then, after a few months, advertises an advantageous opening which he (the present possessor) is obliged to give up on account of an appointment abroad. Eventually the practice is sold, and the new man finds out, all too late, that he has bought a worthless opening and is still further hampered by being unable to obtain any credit from the tradesmen around, as the gentleman who has just departed quite forgot to settle many bills. We cannot believe the swindling is carried on quite so systematically and in such a wholesale manner as represented by our contemporary, but it unfortunately cannot be denied that many unfortunate men are swindled in buying practices, and too often the deceivers do not get called to account, for the buyer, already having parted with much of his capital, dare not risk the remainder in an expensive and possibly unsuccessful lawsuit, but settles down to a struggle

for existence which may hamper him for many years. The only true remedy lies in the great care which ought to be used before buying a practice, and it is well worth while to spend a little extra in having the books and general circumstances well examined rather than risk years of drudgery, and possibly ruin, which may follow an unfortunate purchase.

NEURITIS IN PREGNANCY.

THE view of Eulenburg that many cases described as puerperal neuritis are really cases of neuritis occurring in association with pregnancy receives confirmation from a case published in a recent number of the *Deutsche Medicinische Wochenschrift* by Dr. Stembo. The patient was a young woman aged twenty-four, who, in the second month of her first pregnancy, was seized with persistent vomiting, which continued for three months. During this time there were pains in the legs and later distinct weakness in them, especially affecting the left leg. There was pain on extending the fingers, impairment of the movements in the lower limbs, atrophy of muscles in the upper and lower extremities, especially in the left peroneal region, and pain on pressure both in the muscles and nerves of the legs. There was also talipes equino-varus, the sensibility was impaired, the right knee-jerk was lessened, and the left could not be elicited. Electrical and other treatment effected much improvement, and this was considerably increased when pregnancy was completed.

THE ADMINISTRATION OF OATHS IN COURTS OF LAW.

THE approaching autumn assizes, which will be held in all but a very few assize towns and cities, induce us to refer again to the subject of the administration of oaths in our courts of law. We learn from a reliable source that in the North of England the oath with uplifted right hand, which has been the universal practice in Scotland for ages past and is now permitted in England, Wales, and Ireland by the Oaths Act, 1888, makes slow progress. Those who avail themselves of the fifth section of the Act just cited are mostly members of our profession who, having the courage of their convictions, prefer this more cleanly and solemn mode of adjuration to the uncleanly mode of assenting to the oath by handling and kissing the cover or the inside of a book which has been used for a similar purpose by a succession of witnesses or jurors. The indifference shown in the matter is very remarkable and can only be accounted for by the Englishman's veneration for ancient customs however objectionable, and the rooted dislike to any change which makes him singular. It is strange in these days of bacilli and microbes that persons who would shrink from touching with their lips a glass, cup, pipe, or anything in common with other persons should see no danger in this kissing of the Testament. When the practice commenced we have been unable, even after the most diligent search, to discover, but there are very good grounds for believing that it did not become general till the latter part of the sixteenth century. Equally unsuccessful have we been in our efforts to discover when the uplifted hand first became the form of oath in Scotland. It is evident, however, that it is the more ancient form of adjuration as well as the more universal, kissing the Book being limited to England, Ireland, and the British colonies. The form of swearing with uplifted hand has already had to fight a battle with ignorance where such might have been least expected—namely, among legal coroners, stipendiary and lay magistrates, county court judges, and even recorders. Our learned judges have not displayed such lamentable ignorance of an Act which is now nearly seven years old, though one has expressed his surprise that anyone should think he incurred a risk by kissing a Testament. Another learned judge (Justice Henn Collins) takes a very different view, having ordered a book to be destroyed after it had been handled and kissed by a witness who was infected with syphilis.[1] All the other judges have permitted the "Scotch oath," as it is often called, to be taken before them without remark. All that is necessary for a witness to do is to raise his right hand as he enters the witness-box, when the form of oath will be given him on a card to repeat, or will be dictated to him. The same rule applies to an oath taken under any circumstances and by anybody.

THE TREATMENT OF LEPROSY.

WE are glad to observe that Dr. Impey, the medical superintendent of the leper establishment of Robben Island, has arrived in Europe for the purpose of visiting the leper asylums in Norway, Russia, and Constantinople. Communications to the daily press by the ubiquitous interviewer are probably not the form which Dr. Impey would himself choose as an authoritative exposition of his views on leprosy. It is from this source, however, we learn that Dr. Impey attaches great importance to the fact, which has been long known, that under the influence of febrile and inflammatory infections of the skin, such as erysipelas and dermatitis, the local symptoms of tuberculous leprosy often disappear for a time, and that he considers that if this treatment were pushed in the earlier stages of the disease better results than have yet been chronicled might be obtained. Dr. Impey is acting judiciously in visiting the chief centres of leprosy in Europe before employing this treatment on a large scale. Although the facts on which the suggestion is made are well known, the treatment is not even mentioned in the work recently published by Hansen and Looft. Dr. Impey obtained a prize from the Royal Commission on Leprosy for an essay on the disease in South Africa, and at Robben Island he has a large number of patients under his care. It is reasonable to believe that his visit to Europe will bear interesting fruit after his return to Robben Island. The same newspaper report refers to Dr. Impey's views on the isolation of lepers, but we prefer not to take a brief newspaper report as a declaration of Dr. Impey's ideas on this important question.

CONTAGIOUS DISEASES AND INDIAN CANTONMENTS.

REFERRING to a Memorandum of the Army Sanitary Commission of Dec. 11th, 1893, regarding the prevalence of venereal diseases among European soldiers in India, we notice that the Commission, whilst fully recognising the grave character and magnitude of the evil, state that they cannot recommend the re-institution of the system of compulsory lock hospitals, mainly because the results of the experience obtained during the long time that those hospitals were in operation showed that, so far from the sanguine views which were entertained as to the reduction of these diseases by their agency having been realised, the system had practically failed to accomplish that object. We gather that had it been otherwise the Commission would not have hesitated to urge its re-establishment without delay. That the prevalence of these diseases in our Indian cantonments has gravely increased of late years and urgently calls for remedy does not, unhappily, admit of any dispute. It is alleged, however, that on a comparison between the stations in which these hospitals were closed and other places where they were in continuous operation there was a reduction of the admissions into hospital from those diseases to the extent of one-sixth only in favour of the latter. If this be so, it shows, no doubt, that the system was a relatively ineffective one. But the fact that the statistical results of the system previously in force in India have not proved as satisfactory as could be wished

[1] THE LANCET, Nov. 10th, 1894: "A Condemned Bible."

is not at all conclusive to our minds that the working of a different and better system would not be attended with different results. We hold that, at any rate, some provision is absolutely necessary to meet the requirements of the case of diseased women plying their trade to the grave danger of all who consort with them. It seems to us a violation of logic and common sense that the authorities should not have the power, as in the case of other contagious diseases, to expel women from cantonments who are known to be diseased and will not submit to treatment in hospitals provided for this purpose.

A MEDICAL APOLOGIST FOR THE ABUSE OF MEDICAL CHARITIES.

DR. THOMAS J. MOSS of New York, in the *Medical Record* of Oct. 12th, writes to refute the ordinary views held as to the frequent use of medical charities by those for whom they were never intended. His great argument is that well-dressed people are not necessarily well off. "All of these people must appear well dressed at their place of business or discharge would quickly follow." These institutions (free dispensaries) are labeled "free." "Why, then, should they advertise free treatment, and when once the patient is within the toils demand a fee?" This is either a play upon words or is playing with the intelligence of the profession and the public. Nobody denies that well-dressed people may occasionally be as poor as those who are badly dressed—in other words, nobody denies that mere dress is not a guide to the means of a patient. Nobody wishes to deny to decent, well-dressed people the help of a free or provident dispensary. Still less does anyone wish to deny them facilities for getting special help or a special opinion in special circumstances. What the profession universally, with the exception of Dr. Moss, demands is that in ordinary circumstances ordinarily well-to-do people of all classes but the poorest shall pay for medical attendance as they pay for all the other commodities of life. Ours is the only profession that accommodates itself to the means of the classes who are not rich, and yet the only one that is expected to act without due remuneration. By all means let the poor be healed in an emergency, if necessary, for nothing, but let us be sure that they are poor, and even then society and not the medical profession only should bear the cost.

AFTER the delivery of the Harveian Oration upon Oct. 18th the Baly Medal, awarded every other year to "some person who has distinguished himself in the study of physiology," was presented to Dr. W. H. Gaskell, F.R.S., the Lecturer on Physiology in the University of Cambridge. In the evening Dr. Gaskell and the Harveian orator, Dr. Church, were entertained at dinner in the College by the Fellows' Club.

AS will be seen in another part of THE LANCET the number of freshmen who have signified their intention of studying for the M.B. degree at the Cambridge University is 151, a number larger than in any previous year. At the present time there are nearly 200 students engaged in practical dissection, and the supply of anatomical material is unusually abundant.

AS we go to press the Comitia of the Royal College of Physicians of London are sitting in conclave discussing the question of the admission of women to the examination for the licentiate. There is, we understand, likely to be considerable difference of opinion among those present.

THE Sixth Congress of Medicine in Italy was opened on Tuesday last by Signor Baccelli, the Minister of Public Instruction.

THE report of the Council of the Royal College of Surgeons of England to be presented to the meeting of Fellows and Members which will be held on Nov. 7th has now been issued. Owing to press of matter in our present number we are obliged to defer publication of a summary thereof and our comments thereon until next week.

THERE have been recently three successful cases of excision of the spleen for injury at St. Thomas's Hospital. As these are, we believe, the first successful cases that have occurred in Great Britain the profession will look forward with interest to learning the details.

THE authorities of King's College, London, have arranged for the delivery of free public lectures in the theatre of the College during the winter session now commenced. The lectures will be given on alternate Mondays at 8 P.M.

DR. JOHN S. BILLINGS, director of the American Army Medical Museum, has retired from the service, and accepted the post of director of the Department of Hygiene in the University of Pennsylvania.

IN Mr. Septimus Lowe, Lincoln has lost a valued citizen, for he was for twenty years coroner for the city, only retiring from the post recently on the attainment of his seventieth year.

PROFESSOR KÖNIG of Göttingen has been chosen, we understand, to fill the post of the late Professor Bardeleben, Professor of Surgery at Berlin.

Pharmacology and Therapeutics.

VALUE OF CERTAIN COMBINATIONS OF IODIC ACID.

DR. RUHEMAN of Berlin, following up some previous researches, has shown that some of the salts formed by a combination of iodic acid with metals and with alkaloids possess a remarkable therapeutic value. This is especially the case with the iodates of silver, lithium, oxide of mercury, strychnia, codeia, hyoscine, and atropine. The first of these salts is insoluble in water, but all the others are soluble and can therefore be employed hypodermically. Iodate of silver administered internally is an excellent astringent and intestinal antiseptic, effecting a rapid cure in acute diarrhœa, chronic enteritis, and intestinal hæmorrhage. It does not interfere with the digestive functions, indeed, it appears rather to exert a favourable effect upon them. The dose is 0·005 to 0·01 gramme. Iodate of lithium was administered hypodermically in doses of 0·1 gramme in cases of uric-acid diathesis and nephritic colic. A very few injections were sufficient to stop the appearance of uric-acid deposits in the urine. This salt can also be given in the form of pills, each containing 0·15 to 0·20 gramme, to be taken three times a day. The iodate of oxide of mercury dissolves readily in water when iodide of potassium is present. The stability of the preparation is, however, uncertain. It is very suitable—in the form of hypodermic injections—for syphilis. The solution is made by dissolving 0·115 gramme of oxide of mercury and 0·08 gramme of iodide of potassium in 10 grammes of distilled water, so that a Pravaz syringeful contains about 0·01 gramme, or one-seventh of a grain of the mercury salt. The injections are somewhat painful and are only administered every second or third day. They were given with good results in twenty-four cases of syphilis in various stages. The total number required for a complete cure is stated to have been usually twenty, though occasionally thirty were needed, but the good effects very soon began to show themselves. The dose varied from that mentioned above to half as much again. The drug thus given was invariably well borne and appeared to have far less tendency than other mercurial preparations to excite stomatitis or kidney trouble. It may, of course, be administered by the mouth. Iodate of quinine may be administered either by the mouth or

hypodermically in doses of from 0·05 to 1 gramme and produces neurotonic and anti-neuralgic effects. When given hypodermically but little pain is occasioned and abscesses are never formed. Iodate of strychnine should not be given hypodermically in doses exceeding 0·006 gramme. Iodate of codeia is a much more efficient sedative and analgesic than the other salts of this alkaloid. In hypodermic doses of from 0·03 to 0·05 gramme it is very useful in neuralgia and convulsive cough, and as a substitute for morphia in the treatment of persons who have contracted the morphia habit. Iodate of hyoscine has two or three times the therapeutic effect of the hydrochlorate, the iodide, or the bromide, so that the maximum dose may be considered as 0·0005 gramme for internal use and 0·0002 gramme for hypodermic use; indeed, half this last dose is usually sufficient to produce all the effect required. In ophthalmic practice a solution of the strength of 0·05 or 0·06 per cent. may be used with advantage as a mydriatic in iritis and keratitis; it acts more quickly than other preparations of hyoscine and does not set up any irritation. Iodate of atropine in a solution of the strength of 0·5 to 1·5 per cent. is likewise an excellent mydriatic, the dilatation it produces coming on more rapidly and disappearing earlier than that caused by other salts of atropine. Another advantage this solution of iodate of atropine has is that it remains sterile for a long time and does not require other antiseptic substances to be added to it. The great physiological activity of iodates, especially that of quinine, was insisted on many years ago by Sir Charles Cameron.[1]

TERTIARY BLOOD SERUM IN PRIMARY SYPHILIS.

Dr. Viéviorovski of Moscow has made some experiments on the treatment of primary syphilis by means of blood serum from individuals affected with gummata or other tertiary forms. He was careful to select for his serum-giving subjects three persons of ages between twenty-five and forty in whom the disease had run a favourable course. The blood was obtained from the median basilic vein and was received into a vessel into which had already been placed some solution of common salt of the strength of 20 per cent. and equal in quantity to one two-hundredth part of the volume of the blood to be drawn. From this mixture the serum was prepared and examined in chemical and bacteriological laboratories, none being used until it had been proved capable of standing in a thermostat at 37·5°C. for several days without developing any mould. It was preserved in the dark and in a cool place. Five patients were experimented upon, all of whom had either hard chancres or syphilitic rash and sore-throat, no other treatment being or having been employed. The serum was injected by means of a sterilised syringe with an asbestos plunger into the cellular tissue below the angle of the scapula, the mean dose being ten cubic centimetres, and the skin being first carefully cleansed by means of ether, spirit, and carbolic acid. The injections were repeated every alternate day and gave rise to scarcely any local disturbance. Under this treatment the patients rapidly improved, feeling better and being free from pain, sleeping well and increasing in weight. The physical signs of the disease, too, showed that a good effect had been produced upon it, the chancres healing very quickly and the rash becoming less distinct. More than twenty injections were given in each case. They did not, however, appear to have much effect in preventing secondary symptoms, so that Dr. Viéviorovski is far from professing to have discovered a perfect treatment for syphilis. He thinks, however, that he has shown that the serum of the blood of persons with tertiary syphilis has some beneficial effect on primary manifestations. His observations, therefore, though they are hardly likely to be repeated in this country, have a certain value from a theoretical point of view, and he proposes to carry out further researches on the subject himself and will doubtless find some of his own countrymen to repeat them. They are, in fact, a continuation of previous observations published by Professor Pellizzari of Florence and M. Gilbert of Paris.

TRIONAL AS A HYPNOTIC FOR CHILDREN.

The *Clinical and Therapeutic Journal of Infants* recommends trional as the most prompt hypnotic for children. Given in small doses of twenty centigrammes in cachets it produces a sedative action on the brain in many cases of nervous excitement, which results in sleep being quickly obtained.

TREATMENT OF VOMITING.

In cases of vomiting Lasegne has successfully given tincture of iodine in doses of five to ten minims in sweetened water. It has been found useful in the vomiting of pregnancy. It can be prescribed with chloroform—viz., tincture of iodine, chloroform, of each five grammes—of which five minims may be taken in a little water morning and evening on taking food. It may also be prescribed with peppermint water. Creasote has also been found useful in cases of vomiting, and may be prescribed thus: creasote, oil of sweet almonds, of each five grammes; five to ten drops three or four times a day in milk.

[1] THE LANCET, June 24th, 1882.

THE ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A MEETING of the committee of the Association of Fellows of the Royal College of Surgeons of England was held on Wednesday, Oct. 23rd, at 5.30 P.M., at 25, Grosvenor-street, W. Mr. Timothy Holmes, Vice-President, occupied the chair. There was a full attendance of members of the committee. The minutes of the last meeting were read and confirmed. The hon. secretary (Mr. Percy Dunn) read the following letter from the secretary of the Royal College of Surgeons in answer to a recent resolution of the committee which had been sent to the Council of the College.

"Royal College of Surgeons of England, Lincoln's-Inn-fields,
"London, W.C., 31st July, 1895.

"Telegraphic address, 'Splints,' London.

"DEAR SIR,—I submitted to the Council your letter of the 22nd inst., forwarding a copy of a resolution adopted by 'the Committee of the Association of Fellows' in reference to the conduct of the business at the meeting of Fellows on the 11th inst., and in reply thereto I am directed to communicate to you the following resolution of the Council of the 11th inst.—viz.: 'That in answering Mr. Percy Dunn's letter the Council wish to point out that the meeting of Fellows was held and conducted in strict accordance with the regulations appertaining to the meeting, and that as there were no notices of motion on the agenda no discussion could properly take place, the regulations of the meeting requiring previous notice of twenty-one days.'

"I am, Dear Sir, yours faithfully,
"EDWARD TRIMMER, Secretary."

After some discussion it was decided to reply to the above letter in the form of the following resolutions, which were proposed, seconded, and unanimously carried: "1. That the Committee of the Association of Fellows regrets to learn that in the opinion of the Council the last meeting of Fellows was conducted in strict accordance with the regulations appertaining to these meetings. 2. That this regret is based upon the belief of the Committee that when the regulations for the Fellows meetings were first drawn up it was intended by their framers to give the Fellows the opportunity without definite notice (*a*) of making any observations necessary on the minutes; (*b*) of asking for any further information desired from the Council on any topic contained in the agenda; (*c*) of giving notice of motion for a future meeting, and (*d*) of discussing any of the subjects dealt with in the Council's report. 3. That, if the present regulations do not provide the opportunities referred to in the preceding resolution, the committee would respectfully suggest to the Council that the regulations should be modified in the direction indicated. 4. That a copy of the foregoing resolutions be forwarded to the secretary of the college for presentation to the Council at its next meeting."

A communication was read from the secretary of the Society of Members of the College, in connexion with which the following resolution was adopted: "That it is undesirable that the Association of Fellows should take any conjoint action with the Society of Members in regard to the resolutions which the latter body proposes to bring forward at the annual meeting of Fellows and Members of the College on the 7th prox."

It was also unanimously agreed that the question in regard to the admission of women to the examinations at the College was not one upon which the Association, as an association, was called upon to express any opinion. It was further decided not to bring forward any resolution on behalf of the Association at the ensuing annual meeting.

A resolution was passed fixing the annual general meeting of the Association for Wednesday, Nov. 13th, due notice of the same to be sent to the members of the Association.

The hon. secretary having reported that Mr. J. J. Purnell had been prevented by illness from attending the meetings of the committee, a resolution expressing the regret and sympathy of the committee was unanimously passed. This concluded the business of the meeting and the committee adjourned.

ENTRIES AT THE MEDICAL SCHOOLS.

FROM returns kindly supplied by the Deans and Registrars of the various medical schools and universities of London and the provinces, we are again enabled to place before our readers a table showing the number of students who have registered for the first time, and also of those who are at the present moment in attendance at the various institutions for the purpose of finishing their curriculum. As far as possible we have endeavoured to make the table as useful for the statistician as for the general reader, but the schools do not all follow the same plan in computing the number of students on their rolls, and this consequently detracts from the usefulness of the table in cases, where mathematical precision may be required. It will be readily perceived that some of the preliminary science students may be included in the number of generals tudents, while it is just possible that some of the general students may also be dental students, and in this way the column giving the total of the entries for the year cannot be looked upon as giving the exact number of those who have entered for a strictly medical course. Of course, the entries are in many cases not yet complete, but for London and the provinces they are sufficiently so for approximate comparison. The Irish and Scotch schools begin work at a much later date than the English; and as they have practically only just commenced the winter session the figures are not available for comparison.

From a strictly medical point of view the column headed General Students gives the most interesting figures. Comparing the total number of general students who entered the London medical schools in 1894–5—namely, 555—with the aggregate of entries for the present session (excluding the London School of Medicine for Women)—viz., 580—it will be seen that there has been a slight increase.

The schools showing the most numerical progress are the London Hospital Medical School with an increase over the figures of last year of 24, St. Thomas's Hospital Medical School with a similar increase, and St. George's Hospital Medical School with an increase of 15. The greatest fall is at St. Bartholomew's Hospital Medical School, where the general entries number 14 less than last year. This, however, is not a serious falling off when the large number who patronise this school is considered. The London School of Medicine for Women shows a record of 5 less than last year. Of the 20 new students who have entered the National Dental Hospital, 13 take the two years' hospital curriculum and 7 study for a period of twelve months. These latter are either registered medical and dental practitioners or students from the Continent.

In all but two cases—Durham University and University College, Bristol—the provincial schools individually show an increase in the number of new entries, the most marked being that of Owens College, Manchester, which records an increase of 23. University College, Liverpool, has increased its number of new entries by 15, and Yorkshire College, Leeds, by 12. Cambridge University shows an entry larger than in any previous year, 151 of the freshmen who have matriculated this year having announced their intention of studying for the M.B. degree. On the whole, no very striking record has been made by either the metropolitan or the provincial medical schools.

NAME OF SCHOOL.	Analysis of new entries.					Number of students at present on the roll.					
	General students.	Special or occasional students.	Dental students.	Preliminary science students.	Total number of new entries for session 1895–96.	First year.	Second year.	Third year.	Fourth year.	Fifth year and upwards.	Total, 1895–96.
London Schools.											
St. Bartholomew's Hospital	105	62	—	20	**187**	†	†	†	†	†	—
Charing-cross Hospital	18	38	28	—	**84**	44	46	25	33	53	**201**
St. George's Hospital	50	3	1	1[1]	**55**	†	†	†	†	†	—
Guy's Hospital	80	37	32	35	**184**	†	†	†	†	†	—
King's College Hospital	30	71[2]	—	11	**112**	†	†	†	†	†	—
London Hospital	75	63	—	13	**151**	75	51	65	37	90	**318**
St. Mary's Hospital	71	73	1	13	**158**	†	†	†	†	†	†
Middlesex Hospital	18	27	9	2	**56**	28*	17‡	29††	45	69	**188**[3]
St. Thomas's Hospital	74	17	—	2	**93**	†	†	†	†	†	—
University College Hospital	45	76	—	82	**203**	†	†	†	†	†	—
Westminster Hospital	14	6	—	4	**24**	14	12	15	9	26	**76**
School of Medicine for Women	24	2	—	—	**26**	26	31	26	19	45	**147**
Provincial Schools.											
Cambridge University	—	—	—	—	**151**	†	†	†	†	†	—
Oxford University	†	†	†	†	—	†	24	25	†	†	**49**
Durham University	24	37	—	—	**61**	30	45	30	39	25	**169**
Mason College, Birmingham	34	35	4	8	**91**	†	†	†	†	†	—
Owens College, Manchester	68	60	13	62	**201**	†	†	†	†	†	—
Sheffield School of Medicine	13	—	—	3	**16**	16	†	†	†	†	**16**
University College, Liverpool	37	23	11	28	**99**	45	43	22	28	42	**180**
University College, Bristol	16	1	1	10	**23**	†	†	†	†	†	—
University College, Cardiff	18	30[4]	—	11	**59**	18	16	5	†	†	**39**
Yorkshire College, Leeds	37	4	—	19	**60**	†	†	†	†	†	—
Dental Hospitals.											
Dental Hospital of London	—	—	40	—	**40**	—	—	—	—	—	—
National Dental Hospital	—	—	—	—	**20**	—	—	—	—	—	41

[1] In addition to general students. [2] Including bacteriology.
[3] Total number attending classes for their respective year's study in the conjoint curriculum. [4] Not medical.
* Plus 9 dental students. † Returns not supplied. ‡ Plus 12 dental students. †† Plus 5 dental students.

THE SANITARY STATE OF FULHAM.

AT a recent inquest on the body of a child, who lost his life by slipping on to the fly-wheel of a gas engine from which his father was removing the rust caused by an overflow of sewage, fresh prominence was given to a sanitary grievance which has existed in Fulham for the past ten years or more. Immediately after a heavy rain the basements of some of the houses become flooded with sewage to the depth of, in some cases, eighteen inches. After the storm is over the water subsides leaving several inches of foul smelling sediment. In the majority of instances the sewage enters the basement through the drainpipes, bubbling from the traps to a considerable height, and in one case the lid of an inspection chamber was forced off. In one house, the basement of which is covered by concrete, sewage water has forced its way through the soil, and the efforts of the occupier of the house and his builder to find the source of its entry have been fruitless.

For the past two or three years frequent complaints have been made by the Fulham Vestry, and towards the latter part of 1894 the County Council were appealed to on four occasions within a period of two months. As recently as August last they were petitioned, but no satisfactory reply has been received; indeed, the only answer which the vestry can obtain is that the Council are giving the matter their attention. Nothing whatever seems to have been done either to find out the cause or to remedy this deplorable state of things. The vestry give it as their opinion that greater pumping power is required to carry away the sewage, and some colour is given to this when it is noted that the flooding usually takes place after the occurrence of a storm on a Saturday or on a Sunday when the pumps are not at work. There is, however, another probable reason, and that is that the population has grown so rapidly that the main sewer, which eighteen years ago was large enough to serve a population of some 20,000 inhabitants, is not now of sufficient capacity to carry away the refuse of, in round figures, 100,000 people. That the evil is growing is shown by the fact that, although many of the houses have been troubled by the overflow for years, others are only just beginning to experience it. The occupier of one of the houses where the overflow has recently begun to show itself is having a brick wall nearly two feet high placed in front of his yard door in order to prevent the overflow from entering his kitchen, and another has been put to considerable expense for traps to keep out the sewage. But the evil of these palliative measures is clearly shown, for upon the removal of a floor upon which the flooding had recently taken place several inches of foul-smelling water were found beneath it. A deputation of the vestry and ratepayers has probably waited upon the Main Drainage Committee of the County Council by this time, and it is to be sincerely hoped that an epidemic of disease will not occur before the County Council take some active measures to stop such a scandalous condition of things.

THE PARIS PRISON CONGRESS, 1895.

THE Fifth Quinquennial Prison Congress recently held at Paris was well attended. Delegates from twenty-five countries were present, and for the first time Great Britain was represented officially. The President of the French Republic attended the opening sitting, and afterwards received the foreign delegates. The Minister of the Interior opened the Congress with an eloquent speech. Several other ministers also attended the meetings, and a few delivered addresses. The Congress, which met in the spacious rooms of the Collège de France, was divided into four sections, some of the principal subjects dealt with being habitual offenders, the Bertillon system, criminal insanity, intemperance and inebriate asylums, and juvenile offenders.

An animated debate took place in the section dealing with the subject of habitual offenders and cumulative sentences, and a resolution was unanimously adopted in favour of a progressive cumulation of sentences for this class of criminals, recommending also more rigorous dealing with the professional malefactor.

In the course of the discussion on the question of insane and weak-minded prisoners Dr. Motet (of Paris) urged that society in general has not hitherto been adequately protected against insane criminals or against their premature removal from asylums.

The very important questions of child saving and the treatment of criminal and neglected youth occupied a large share of the time and thought of the Congress. It was stated that in several American States the system of boarding out has been resorted to with excellent results. The children are placed with carefully selected foster-parents and are under regular supervision.

Opportunities of seeing the practical working of the Bertillon system of identification were afforded to many of the delegates, and the Congress recommended the general uniform adoption of the system as being most desirable everywhere. The members of the Congress were also granted permission to visit the prisons and reformatories in and around Paris. Considerable interest was manifested in the warders' school at the La Santé prison, where forty-eight warders from the provincial prisons come annually in two parties of twenty-four each, staying for six months, during which they receive instruction by lectures and classes in various branches of knowledge and are also taught the practical application of the Bertillon method of identification.

The Congress accomplished in the session of ten days an amount of useful and instructive work; many remedial measures were advocated, and if carried out the next quinquenial meeting will in all probability look back upon much of the work of the present Congress with satisfaction.

THE FORTY-FOURTH REPORT (WITH APPENDICES) OF THE INSPECTORS OF LUNATICS (IRELAND).

THE number of registered lunatics in Ireland on Jan. 1st, 1895, was 17,655. This shows an increase of 379 since the previous year. The inspectors repeat their views regarding this increase, attributing it as being mainly due to accumulation and to absorption of part of the mass of unregistered lunatics residing in private dwellings or wandering about the country at large.

The number of insane people of whom no official cognisance is taken appears to be large, amounting to over 22 per cent. of the whole; the statistical tables indicate that the ratio of registered insane per 100,000 of estimated population amounts to 384, while, if to this be added the number of the insane wandering at large according to the census returns of 1891, the proportion would be found to amount to 492.

Considering the overcrowded state of the existing accommodation, and notwithstanding the additions and extensions now in progress or about to be undertaken in the majority of Irish asylums, this state of affairs affords matter for serious consideration, and the inspectors appear to put it lightly when they state, "it is to be feared that this increase of the insane under care in Ireland must continue for some years to come." 3229 cases were admitted into the district asylums in 1894; of these, 2448 were first admissions. The recoveries amounted to 1309, or 40·5 per cent. of the admissions, and the proportion per cent. of deaths to the daily average number resident was 8·8. Suicide accounted for 5 deaths, and 2 serious accidents resulting in loss of life are recorded. Post-mortem examinations were held in 287 instances. This is a considerable increase on past years, but room is left for improvement. Two asylums, Richmond and Ballinasloe, are in the fore-front as regards pathological work with 66 and 62 per cent. of necropsies respectively; in nine asylums no post-mortem examinations were made. No doubt when the medical staff of these institutions is strengthened a much higher record will be established. Overcrowding is general; the sanitary arrangements of several district asylums stand in great need of improvement; fever and dysentery appear to be too prevalent. At Richmond Asylum an epidemic broke out resembling in its symptoms the Eastern disease known as beri-beri; 152 patients were attacked, and 25 succumbed. The epidemic during its whole course attacked only the insane inmates of the institution. The sanitary condition of this asylum has long continued to be a source of anxiety to all connected with its management, and it is to be hoped that the new asylum at

Portrane will afford a much-needed relief in this respect. Notwithstanding the many drawbacks under which they labour and the numerous difficulties with which they have to contend, the heads of the district asylums continue to show the same conscientious and scrupulous zeal in the interests of the insane as hitherto. This is evidenced by the favourable recovery-rate, the small proportion of suicides and accidents, and the low death-rate, which compares well with that of similar and more favoured institutions in other lands.

The State Criminal Asylum at Dundrum passed a quiet and uneventful year. Several much-needed improvements have been completed and others are contemplated. The system of payment to patients for work done, which has been beneficially employed at Broadmoor for a number of years, has been introduced here and has apparently produced very satisfactory results. The tale of the insane in the lunatic wards of Irish workhouses continues to be of the same sad and depressing nature. The patients numbered 4044. The buildings are overcrowded and understaffed, the sanitary arrangements primitive, and the personal cleanliness of the inmates and the state of the bedding in many cases show much need of improvement. It is surely time that the Local Government Board awoke to a sense of their duty and responsibility towards the most helpless of the insane. A liberal measure of relief for the amelioration of the lot of these pauper lunatics ought to be provided.

There is no change in the number of private asylums. It is pointed out that in some of these institutions more comforts for the patients, increased accommodation, and suitable exercise grounds are required. The usual tables and the inspectors' reports of their visits to the various asylums are appended. These are invariably favourable to the management.

From the fulness and accuracy of this report, and the attention given to the pressing need of improvements in the surroundings and condition of the insane in Ireland, it will be gathered that considerable zeal is displayed in the Lunacy Department. It is a careful summary of a year's work and affords interesting, although not altogether hopeful, reading.

CHOLERA.

THE latest official accounts from St. Petersburg show that there has been a marked decrease in the number of cases of cholera in Russia, and, as we surmised last week, the sanitary authorities in that country are confidently looking forward to the early disappearance of the disease.

We learn from Cairo that there were two fresh cases and two deaths at Damietta on the 20th inst., while at El Menzaleh and its vicinity there were altogether thirty cases in the course of two days, twelve of which terminated fatally. Some very interesting information about Damietta, from our Egyptian Correspondent, will be found in another column.

ST. GEORGE'S HOSPITAL AND MEDICAL SCHOOL.—Considerable changes and improvements have taken place in the hospital and school during the past year. The interior of the hospital has been repainted and decorated throughout, and a reconstruction of the central block has been begun and carried nearly to completion. The reconstruction, which is not seen from the street, will provide two new operating theatres of the most modern pattern, the benches and floors being composed of marble terrazzo, and the fittings entirely of metal and glass. There are included also an extension of the chapel and board-room and a new nurses' dining-room. In the school the electric light has been installed, the arc light being laid on to all the theatres for the purpose of lantern demonstrations. The anatomical collection has been extended, a collection of surgical instruments provided for inspection, and facilities given for photographic work. Additional classes for the University of London and for the Cambridge Second M.B. work have been arranged for, and a lectureship established, for the first time in London, in Tropical Medicine. Dr. Patrick Manson is the occupant of the new chair. A valuable prize for proficiency in bacteriology has been established in the school by Mrs. Frederick E. Webb of Maida Vale, who has endowed it with the sum of £1000.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Worcestershire County Sanitary District.—Mr. G. H. Fosbroke reports that the general death-rate of the county, with an estimated population of 303,313, was for 1894 14·2 per 1000, as against 18·1 and 16·1 in 1892 and 1893 respectively. Small-pox invaded many of the urban and rural districts of Worcestershire during the period in which the disease was epidemic in Birmingham, and the city seems to have formed the focus for spreading the disease in this county. In reference to the notification of measles, Mr. Fosbroke states that his experience hitherto has tended to the conclusion that such a step reduces the mortality from the disease owing to the fact that the official visits lead to at least some sort of isolation, and thus to reduced exposure. Facilities were afforded to medical officers of health and general practitioners by the Worcestershire county council both for obtaining antitoxin for the treatment of diphtheria and also for submitting doubtful cases to bacteriological examination. Mr. Fosbroke reserves for a subsequent date a detailed report upon this subject, but he remarks in general terms that, so far as the experience of his county goes, the antitoxin treatment has had satisfactory results. Tewkesbury rural district council strenuously refuses to adopt compulsory notification. As Mr. Fosbroke observes, the fact that thirty-four out of thirty-five sanitary districts in Worcestershire have voluntarily availed themselves of the Notification Act should be sufficient to induce the Tewkesbury district councillors to give the Act a trial. Obviously, however, the councillors referred to are disinclined to admit that the mere fact of a large majority is any evidence of either the moral or intellectual rectitude of the position. In a sense we feel compelled to admire this stubborn resistance of the Tewkesbury rural district council in face of these overwhelming odds, but we think they might now capitulate without any very serious loss of dignity. To Worcestershire, as our readers will probably remember, belongs the honour of issuing the two first "orders" under the Isolation Hospitals Act, 1893, and Mr. Fosbroke states that in his county the Act has had a very beneficial effect.

Derbyshire County Sanitary District.—In the middle of 1894 the administrative county of Derbyshire had an estimated population of 444,118. Some slight modifications have taken place in certain districts as a result of the operations of the Local Government Act, 1894. The general death-rate of the county for 1894 was but 15·4 per 1000; the death-rate from zymotic diseases showed a very marked decline upon that of 1893, as also did infantile mortality. There are signs in Derbyshire of considerable activity under the Isolation Hospitals Act, and one hospital district has already been formed, while steps in connexion with another are almost complete. In the case of the Belper Hospital district, one of the urban district councils covered by the terms of the order has decided to appeal to the Local Government Board to be removed from the combination. In each of the above instances the county council has left the control of the hospitals in the hands of the hospital committee, and it has not elected any permanent members on either of the committees. Provision has, however, been made to the effect that, if the hospital committee fail within five years to erect a permanent hospital to the satisfaction of the county council, a new hospital committee, on which the county council is to elect the majority of members, is to come into existence. Dr. Sidney Barwise, the county medical officer of health, expresses a hope that future hospital committees will have larger areas under their charge, so that two or three hospitals may be erected on each area.

LONDON PORT SANITARY DISTRICT.

The report of Dr. Collingridge upon the half-year ended June 30th, 1894, which has just been issued, shows not only how well London is protected against the importation of infectious disease by sea, but also the necessity of continuing the precautions, and even of increasing the equipment at the

disposal of the port sanitary authority. During the half-year under consideration no less than 12,715 vessels were inspected, a total which shows a very material increase on former half-yearly periods. Out of this number 496 were found to be in an insanitary condition, and 455 structural alterations were carried out without any resort to legal proceedings. This latter fact is, Dr. Collingridge remarks, a sufficient indication of the real desire which exists to do what is possible to improve the lot of the sailor, and, we would add, it is an indication also of what must be the admirable tact displayed by the officers of the London port sanitary authority. There are few duties in which the personal equation is of greater importance than in the details of port sanitary administration. Dr. Collingridge thinks it would be of considerable advantage to shipowners and seamen if all plans for new vessels were submitted to the port sanitary authority for approval. Certainly it is desirable that some steps should be taken for securing the construction of all new vessels with a due regard to proper sanitary arrangements and the prevention of overcrowding. Vessels are visited by the port sanitary authority as heretofore in conjunction with Her Majesty's Customs; but there seems to have been some little difficulty in connexion with this matter in the spring of the present year. Complaints of delay to shipping arose, it seems, owing to the practice then in vogue of dealing with each ship in strict rotation, a practice which in some instances led to the detention of vessels for a considerable time. A conference between Her Majesty's Customs and the port sanitary authority was held, at which the former seemed to favour the dissociation of the combined method of inspection. This was, however, objected to, and we are glad to learn that a conference of the two authorities with the Local Government Board had the effect of solving the difficulty in a manner satisfactory to everyone concerned. Briefly put, the arrangement amounts to this;—that where it is found necessary to examine a ship and its passengers and crew in detail, such ship shall be detained until other ships awaiting inspection have been visited. In other words, "the misfortune of one vessel is not to affect all arriving at the same time." The arrangement at Sheerness by which vessels passing through the port sanitary district of London are inspected by a medical officer paid jointly by the London and Rochester port sanitary authorities continues to work satisfactorily. During the half-year under consideration 53 cases of cholera or cholernic diarrhœa were reported as having occurred on vessels during their homeward voyage, and 24 cases of small-pox were dealt with by the port sanitary officers. By-laws have been drawn up by the port sanitary authority for the prevention of nuisances from the carriage of offensive matter &c. by boat, and these when in force should form valuable additions to the means at the disposal of the port sanitary authorities for dealing with nuisances of this kind. Out of the total number of vessels inspected during the half-year 84·5 per cent. were English, 6·3 per cent. Swedish and Norwegian, 4·9 per cent. German, and 1·1 per cent. Danish. No inconsiderable amount of food was condemned within the port sanitary district during the half-year; it comprised 394 cases of tinned meats, 108 casks of salt beef, 390 carcases of mutton, 30 quarters of beef, and 10,200 packages of fruit.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6526 births and 3873 deaths were registered during the week ending Oct. 19th. The annual rate of mortality in these towns, which had been 19·4 and 21·0 per 1000 in the two preceding weeks, declined again last week to 19·1. In London the rate was 17·9 per 1000, while it averaged 19·8 in the thirty-two provincial towns. The lowest rates in these towns were 10·4 in Derby, 13·1 in Nottingham, 13·6 in Croydon, and 15·3 in Brighton; the highest rates were 24·0 in Liverpool, 24·3 in Manchester, 25·5 in Salford, 25·7 in Burnley, and 31·5 in Blackburn. The 3873 deaths included 670 which were referred to the principal zymotic diseases, against 871 and 895 in the two preceding weeks; of these, 333 resulted from diarrhœa, 107 from diphtheria, 83 from measles, 60 from "fever" (principally enteric), 47 from scarlet fever, 39 from whooping-cough, and 1 from small-pox. The lowest death-rates from these diseases were recorded in Halifax, Brighton, Croydon, Norwich, and Leicester; the highest in Swansea, Gateshead, Salford, Burnley, and Blackburn. The greatest mortality from measles occurred in Wolverhampton, Swansea, and Blackburn; from whooping-cough in Gateshead; from "fever" in Bolton and in Sunderland; and from diarrhœa in Salford, Gateshead, Burnley, and Blackburn. The mortality from scarlet fever showed no marked excess in any of the large towns. The 107 deaths from diphtheria included 76 in London, 5 in West Ham, 4 in Manchester, and 3 each in Wolverhampton, Salford, and Hull. One fatal case of small-pox was registered in London, but not one in any other of the thirty-three large towns. There were 119 cases of small-pox in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 19th inst., against 234, 198, and 158 at the end of the three preceding weeks; 7 new cases were admitted during the week, against 21, 17, and 9, in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2838, against 2807, 2802, and 2827 on the three preceding Saturdays; 241 new cases were admitted during the week, against 339, 252, and 332 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 158 and 175 in the two preceding weeks, further rose to 215 last week, but were 114 below the corrected average. The causes of 39, or 1·0 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bristol, Nottingham, Oldham, Newcastle-on-Tyne, and in twelve other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Preston, Huddersfield, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased in the three preceding weeks, from 17·5 to 19·3 per 1000, declined again to 18·7 during the week ending Oct. 19th, and was 0·4 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 13·7 in Perth and 16·8 in Greenock to 22·1 in Leith and 22·5 in Aberdeen. The 539 deaths in these towns included 53 which were referred to diarrhœa, 13 to whooping-cough, 9 to scarlet fever, 7 to "fever" (principally enteric), 5 to diphtheria, 3 to measles, and not one to small-pox. In all, 91 deaths resulted from these principal zymotic diseases, against 96 and 94 in the two preceding weeks. These 91 deaths were equal to an annual rate of 3·2 per 1000, which was slightly below the mean rate last week from the same diseases in the thirty-three large English towns. The deaths from diarrhœa, which had been 62 and 58 in the two preceding two weeks, further declined to 53 last week, of which 20 occurred in Glasgow, 15 in Dundee, and 8 in Edinburgh. The 13 fatal cases of whooping-cough showed an increase of 2 upon the number in the preceding week, and included 5 in Glasgow and 3 in Edinburgh. The fatal cases of scarlet fever, which had been 4 and 7 in the two preceding weeks, further rose to 9 last week, of which 4 occurred in Glasgow, 2 in Edinburgh, and 2 in Aberdeen. The 7 deaths referred to different forms of "fever," were within one of the number in the preceding week, and included 3 in Glasgow and 3 in Edinburgh. The fatal cases of diphtheria, which had been 2 and 5 in the two preceding weeks, further rose to 6 last week, of which 4 occurred in Glasgow and 2 in Edinburgh. The deaths referred to diseases of the respiratory organs in these towns, which had been 98 and 97 in the two preceding weeks, declined to 92 last week, but were slightly below the number in the corresponding week of last year. The causes of 43, or nearly 8 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 21·3 and 26·8 per 1000 in the two preceding weeks, declined again to 24·2 during the week ending Oct. 19th. During the past three weeks of the current quarter the death-rate in the city has averaged 24·1 per 1000, the rate during the same period being 17·0 in London and 18·2 in Edinburgh. The 162 deaths registered in Dublin during the week under notice showed a decline of 18 from the number in the

preceding week, and included 20 which were referred to the principal zymotic diseases, against 12 and 29 in the two preceding weeks; of these, 12 resulted from diarrhœa, 4 from "fever" (principally enteric), 3 from scarlet fever, 1 from diphtheria, and not one either from small-pox, measles, or whooping-cough. These 20 deaths were equal to an annual rate of 3·0 per 1000, the zymotic death-rate during the same period being 2·8 in London and 3·4 in Edinburgh. The fatal cases of diarrhœa, which had been 8 and 17 in the two preceding weeks, declined again to 12 last week. The 4 deaths referred to different forms of "fever" were within 2 of the number recorded in the preceding week, and the 3 fatal cases of scarlet fever exceeded the number registered in any week since June last. The 162 deaths in Dublin last week included 36 of infants under one year of age, and 26 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons showed a decline from those recorded in the preceding week. Three inquest cases and 3 deaths from violence were registered; and 43, or more than a fourth, of the deaths occurred in public institutions. The causes of 22, or more than 13 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

BRIGADE-SURGEON-LIEUTENANT-COLONEL DUKE and Surgeon-Captains Manders, Hayman, and Hale have embarked for a tour of service in Ceylon. Brigade-Surgeon-Lieutenant-Colonel Supple has been transferred from Jersey to Dover, and has been succeeded at Jersey by Surgeon-Lieutenant-Colonel Kirwan. Surgeon-Majors Hayes and Johnston and Surgeon-Captain H. H. Browne have embarked for a tour of service at Hong-Kong. Surgeon-Major O'Keefe has embarked for India and Surgeon-Captain Hearne for Singapore.

INDIA AND THE INDIAN MEDICAL SERVICES.

The following appointments are announced:—Surgeon-Colonel Banks to be Principal Medical Officer, Nagpore District; Surgeon-Captain K. Whitcombe to take Medical Charge of the 6th Bombay Cavalry. Brigade-Surgeon-Lieutenant-Colonel Moore, A.M.S., on return from sick leave from England, is transferred from the Mhow District to the Sind District. Surgeon-Major Lane, A.M.S., on arrival from England, is posted to general duty in the Quetta District. Surgeon-Lieutenant Rivers, on arrival from England, is posted to general duty in the Bombay District. Surgeon-Captain J. G. Hojel is appointed to act as Professor of Materia Medica and Pharmacy, Grant Medical College. Surgeon-Captain J. M. Cadell, Officiating Civil Surgeon, Etawah, is appointed to the Medical Charge of the camp of the Lieutenant-Governor and Chief Commissioner. Surgeon-Lieutenant W. Young, Officiating Superintendent, Central Prison, Lucknow, on being relieved, is appointed to officiate as Civil Surgeon, Gonda, and to hold Visiting Medical Charge of the Bahraich District. Surgeon-Captain J. J. Pratt, Civil Surgeon, is transferred from Gonda to Fyzabad, and to hold Visiting Medical Charge of the Bara Banki District. The Queen has approved of the following promotions among the officers of the Indian Medical Services:—*Bengal Medical Establishment:* Surgeon-Lieutenants to be Surgeon-Captains: Patrick Balfour Haig, Thomas William Archer Fullerton, Ralph Henry Maddox, Edward Victor Hugo, M.D., Harry George Melville, Arthur Oldham Hubbard, Charles George Robson Scott, Herbert Austen Smith, Douglas Richard Green, George McIver Campbell Smith, Hubert Malins Earle, and Joseph George Hulbert. *Madras Medical Establishment:* Surgeon-Lieutenants to be Surgeon-Captains: Pulteney Charles Gabbett and John Lewis Macrae. *Bombay Medical Establishment:* Surgeon-Lieutenants to be Surgeon-Captains: Francis Edward Swinton, Sidney Harvey Burnett, and Thomas Jackson. Her Majesty has also approved of the retirement of the undermentioned officer:—*Bombay Medical Establishment:* Brigade-Surgeon-Lieutenant-Colonel Andrew Barry, M.D.

NAVAL MEDICAL SERVICE.

The following appointments are announced:—Staff-Surgeons: J. L. Barrington to the *Astræa;* F. S. Jackson to the *Forte.* Surgeons: F. W. Stricker to the *Inflexible;* E. D. Minter, J. D. Hughes, T. Austen, and A. H. L. Cox to be lent for study at Metropolitan Hospitals.

THE CHITRAL DESPATCHES.

The telegram from Simla giving a nominal list of the officers mentioned in Sir R. Low's despatches, which was published last week, enabled us to extract the names of the several medical officers that had been included therein. The *Pioneer Mail* of the 3rd inst. publishes in a supplement the notification that has been issued by the Government of India in the military department. The Viceroy of India and Governor-General in Council takes the opportunity afforded by the approaching return to British India of a large portion of the relief force to signify the cordial recognition of the Government of India of the distinguished manner in which the force has acquitted itself during the arduous and completely successful operations now brought to a close. A letter from the Adjutant-General in India forwarding the despatch from Lieutenant-General Sir R. C. Low, commanding the Chitral Relief Force, recapitulates the operations of the force and brings to notice the services of officers and men who have specially distinguished themselves. Among the paragraphs conveying the views of Sir George White, the Commander-in-Chief in India, in regard to these services we find the following: "To the careful medical arrangements and to increased sanitary precautions may be ascribed, in Sir George White's opinion, the comparative immunity from disease and the general good health that the troops have enjoyed under very trying conditions. These results could not have been attained without the great forethought and administrative experience of the late Principal Medical Officer, Her Majesty's Forces in India, Surgeon-Major-General Bradshaw, C.B., and of the officer now filling that appointment, Surgeon-Major-General A. A. Gore; and their efforts have been well seconded by Surgeon-Colonel T. Maunsell, principal medical officer with the force, and the medical officers under his orders." Surgeon-Lieutenant D. W. Sutherland, of the Indian Medical Service, is mentioned "for the promptitude and coolness he displayed in attending on the wounded under short range fire" in connexion with the action on the Panjkora River on April 13th. Surgeon-Colonel T. Maunsell, Army Medical Staff, the principal medical officer with the force, is mentioned as "an officer of ability and experience, and his management of the medical and sanitary arrangements connected with the force has been most successful." Surgeon-Colonel Thomson, M.B., Indian Medical Service, principal medical officer, on the line of communications, is mentioned as "an officer of judgment and experience who administered his department in a very satisfactory manner." The names of Surgeon-Lieutenant-Colonel W. Donovan and Surgeon-Major G. Coutts, M.B., of the Army Medical Staff, and Surgeon-Lieutenant-Colonel P. F. O'Connor and Surgeon-Lieutenant-Colonel W. A. Simmonds, of the Indian Medical Service, are also included in the despatch. It is, of course, very gratifying to us as medical journalists to put the foregoing on record, and to notice that the military authorities in India recognise the labours of the medical service and the good work that its members have done in connexion with the Chitral Relief Force.

THE SEWERAGE OF ALDERSHOT CAMP.

For many months now the rural district council, complicated, of course, by the various local authorities, has been trying to arrange with the Government as to sanitary provision for Aldershot Camp in the matter of drainage. The suggestion was made that a sewage farm should be constructed to receive the contents of the camp drains, the ultimate disposal of the residue to be in the hands of the local authority. A draft agreement on these lines was drawn up and submitted to both parties, and it was understood that the only proposal the Government wished to put forward was that, in lieu of paying a lump sum annually for the sanitary provision, the War Office should become a ratepayer and pay upon its assessment like other ratepayers. The council paid for an assessment of the new military buildings on these suggestions being put before them, but at a meeting on Thursday, Oct. 17th, it appeared that they had been too "previous," to use an Americanism. They had stipulated that their consent to the War Office proposals should pledge them to the acceptance of no definite site for the proposed farm before the matter should have been placed before a consulting engineer to report thereon. The War Office wrote that they considered this practically a refusal by the council to proceed with the stipulations of the draft agreement, and that the question of the disposal of the garrison sewage would now be taken into

consideration by the Secretary of State. The council, after an animated debate, resolved to write to the department objecting to the construction which had been put upon their letter, and calling attention to the fact that it was the authorities' own wish, expressed in November, 1894, to become ordinary ratepayers that had determined the council to carry out the valuation, at considerable expense, of the Government property in order to bring it on the rate books. A resolution from the Portsmouth authorities suggesting the valuation of Government property on the ordinary and uniform basis was endorsed by the Aldershot council. The opinion was freely expressed that the Government department might now carry out the work independently of the latter body.

MALARIA AND ITS CAUSES.

The *Pioneer Mail* of the 3rd inst. has an interesting article on this subject, reviewing the report of Surgeon-Colonel Harvey, of the Indian Medical Service, published in the *Calcutta Gazette*, on the causation of malaria, made in connexion with the Sanitary Drainage Bill recently passed by the Bengal Government. Our Indian contemporary points out how much we still require to learn in connexion with this subject, and considers that the Government should institute a thorough and scientific investigation into the numerous questions at issue. We notice, by the way, that Surgeon-Colonel Harvey accepts the view that malarial fever is due to a parasite, in which, it may be added, he is strongly supported by the observations and researches of several medical officers who have scientifically studied the subject in India.

DEATH IN THE SERVICES.

Surgeon-General George Augustus Frederick Shelton, M.B., M.R.C.S. (retired), on the 12th inst., in his seventy-fourth year. He joined the Army Medical Service in 1845, was promoted Surgeon in 1854, Surgeon-Major in 1865, Deputy Surgeon-General in 1873, Surgeon-General in 1880, and retired on half-pay in 1882. The deceased officer served with the 48th Regiment during the latter part of the siege of Sebastopol (medal with clasp, and Turkish medal).

The London Companies of the Volunteer Medical Staff Corps will take part in the time march which is to take place in the northern suburbs of London on Saturday night next (Oct. 26th).

Correspondence.

"Audi alteram partem."

THE BIRMINGHAM LUNACY PROSECUTION.

To the Editors of THE LANCET.

SIRS,—As I am the unfortunate individual alluded to in your article on this subject—which is of vital importance, owing to the far-reaching principles involved—I must ask you to kindly insert this lengthy communication. I am sure that you must have based your accusations of my ignorance of lunacy laws and practice on the garbled reports and articles in the Birmingham press. Ever since I recovered damages for libel against one of these journals and threatened another of them they have not been prejudiced in my favour. I never personally pleaded ignorance; it would have been false, dishonourable, and disastrous for me to have done so. I was, and am, saturated not only with the Lunacy Acts of 1890-91 but also with the equally important Commissioners' and Lord Chancellor's supplemental statutory rules, besides leading cases. I had lunacy cases before, and I was not so imbecile as to trifle with pains and penalties. What I did admit in my address to the learned Recorder was that I regretted I might have misconstrued the equitable significance of two words—a pardonable error by lawyers, but unpardonable by me. I said "might" out of courtesy. I should, however, now require a High Court decision to convince me that I was wrong. None of the books you refer to decide the point.

I received a lady on May 21st. As she was only suffering from simple mania, and not, consequently, in my opinion,—I beg pardon, I am not allowed an opinion or discretion by the recent decision—"certifiably insane," I accepted her under the Act as a "voluntary boarder." I did not, therefore, require a licence, reception order, or urgency order. Before the statutory twenty-four hours for reporting to the Commissioners in Lunacy had expired a petition for an inquisition had been filed in the Court of Chancery on May 22nd. Now, if she had been "so found by inquisition," the Commissioners could not have got at me. Owing, of course, to the usual Chancery delays, they reached me through a common law quibble. The case came before the chief clerk on May 27th. He was informed that she was in my house and under my care; being satisfied, he adjourned for a further report without making any order. On June 15th I sent up an affidavit and those of two other practitioners certifying a satisfactory condition. On June 17th he was again satisfied, did not make an order, but appointed a Chancery visitor and adjourned to July 17th. In equity, if not in law, she was even now under Chancery jurisdiction. She was "pending," being so found by inquisition. But still more. The Lord Chancellor's Second Rule says that cases "pending" are the same as cases "found," and that persons acting under such conditions are to be indemnified against loss. By reason of this construction I did not keep a register of mechanical restraint, or a register of seclusion, or furnish any of the returns required in the case of Commissioners' patients, for none such are required in the case of private Chancery patients. The Masters in Lunacy do not want formalities, only general information of the patient's condition from the Chancery visitor, leaving the physician discretion in matters of treatment.

On June 26th two practitioners came on a magistrate's order and certified that the patient was not under "proper care and control." In consequence of this my patient was abducted and taken to an asylum, where she died twelve days afterwards, I believe, from exhaustion. For my construction of the two words, I was summoned on Sept. 10th for having committed six misdemeanours, which rendered me liable to twelve years' imprisonment and penalties amounting to £1800 as a possible maximum. The Commissioners in Lunacy, amongst whom were three members of the professsion, gave a fairly large order. At the Sessions I was found guilty of three misdemeanours, and fined £50. For some reason the learned Recorder was not made acquainted with the Chancery proceedings until after the verdict had been returned; that was when I addressed the court. He did not charge me with ignorance of lunacy law and rules—in fact, he appeared to agree with me. He, however, as a layman did consider me grossly ignorant of the proper medical treatment of lunatics, and had intended to have given me a term of imprisonment for having used mechanical restraint.

The patient, aged fifty-six years, suffering from simple mania, alcoholic gastritis, acute bronchitis, dilatation of left ventricle, with mitral murmur (recent), was admitted on May 21st. There were no signs of paralysis, meningitis, or ocular abnormalities, though the retinal vessels were slightly swollen. The membranes of both ears were normal. The urine was free from albumin, sugar, and casts; sp. gr. 1025. The pulse varied, according to excitement, from 85 to 120, and was fairly normal in rhythm and tension. There were no signs of vascular degeneration. She would, and was allowed to, wander about the first night and next day, followed by an attendant. On the 22nd she developed "acute mania." On the 23rd she received whole bath; temperature 100° F. She was wasted (weighed 81 lbs. nude), but very strong. She was placed in bed, and kept there by postural straps—viz., one across the chest and under the arms, which were free, the feet being kept in the centre by ankle straps, which allowed limited motion. She was confined in a barred single room, was quite unconscious of restraint, and made no effort to rise. No medicine or stimulants were given throughout. Soda water was given on first two days, afterwards 60 to 80 oz. milk, 6 eggs, and 3 oz. corn-flour, in a semi-fluid mixture, poured into the pharynx and swallowed automatically owing to inattention. The patient rapidly passed into mania gravis, and on May 29th into acute delirium. Bronchitis was relieved by inhalations, and the dilatation and murmur increased. Acute delirium not even alluded to in many text-books, and apparently not considered by those who discuss restraint. Pathognomonic signs: high temperature 102 to 104 in this case, rapid wasting, sordes, perfect incoherence, unconsciousness of environments, abolition of cerebral function, and above all, continuous restlessness, excitement, and insomnia tending to fatal exhaustion.

Treatment.—Obtain sleep (1) by forced comfortable posture in bed, of necessity (2) perfect quietude, exclusion of attendants from the room necessary, but supervise through an inspection hole in the door frequently. If not, then there are only six possible alternatives to the use of postural straps. The Recorder was told that if I had not wished to avoid expense two trained attendants in the room could have "managed" her—whatever that means—without postural straps. Granted; but I, however, wanted sleep, not "management." Alternative: (1) one or two trained attendants to hold the patient down in bed, whenever there, night and day. Objection: (*a*) this is "manual restraint," much more irritating; (*b*) the necessary noise and presence of the attendants constantly disturb the patient, whose audition and vision are hypersensitive. No sleep here. If not (1) then (2). Permitting the patient to tumble out of bed and as often replacing her, night and day. Objection obvious. If not (2) then (3). Permitting the patient to tumble about in a room "padded" or not, "trained attendants" present or not. Objection: Applicable only to cases with temporary excitement, and where the patient is rational enough to assume a comfortable posture instinctively and sleep voluntarily. In mania gravis and acute delirium such conditions are not present, consequently insomnia and fatal exhaustion must ensue. If not (3) then (4). Pack, "wet" or "dry." Objections: Wet pack must be changed frequently; inapplicable. Dry pack; a much more severe form of restraint than postural straps with the arms free. Still, the Commissioners, even in their last rules, sanction its use, but require the patient to be released every two hours. If I had used the "dry pack" and disturbed according to their rule, I would have killed my patient and got two years—not a quarter enough for my barbarity. In the Holloway case they very properly did not disturb. No prosecution followed. The learned Recorder was horrified, and fined me £50 because I allowed the patient to remain in one position for sixteen[1] hours and did not get her up more than twice a day for natural purposes, but as she had no sense to respond to calls of nature I never knew when to disturb her and get her up. If not (4) then (5). The "protection bed." This is somewhat like a coffin I have seen used abroad. Objection: As the arms are wholly confined it is much more severe than the postural straps. Although recommended by eminent English authorities I would have got about twelve months additional if my patient had died in it. If not (5) then (6). Chemical restraint, hynotics, narcotics. Moderate doses only intensify excitement without producing sleep in acute delirium. Sixty to seventy grains of chloral were given on a few occasions. The risk, however, is very great, and besides does not affect the question of postural straps. This enumeration of alternatives refers only to the treatment of mania gravis and acute delirium, the only form of insanity characterised by continuous excitement and insomnia tending to fatal exhaustion. You say, Sirs, that I ought to have made myself aware of the uses of mechanical restraint. I knew all about the divergent views from Connolly down, but such views are beside my question. These men were discussing the 99.999 cases and I the other one—viz., typical acute delirium with cardiac dilatation occurring in a person aged fifty-six. I will sum up my view. If the patient will stay in bed and sleep, no restraint of any kind. The following statement by R. Percy Smith comes near, but not quite, to my case: "In patients who are wearing themselves out with rolling about or continuous movement some form of restraint, such as the dry and wet pack, is sometimes necessary." During the thirty-six days the patient was exercised once at mid-day in the airing court; and secondly at night in the corridor. On June 21st the temperature was normal, the wasting had ceased, the weight being 73 lbs. There was no dilatation or murmur as observed under chloroform, incoherence and inattention were still present, there was considerable strength, and six hours' sleep was obtained daily without hypnotics.

The Lunacy Commissioners discourage the use of mechanical restraint and seclusion. It is, therefore, necessary to keep the registers as clear as possible of entries of hours of both in all institutions under their inspection. The first may be avoided by "manual restraint," of which no entries need be made. The second, seclusion, by keeping the patient in a single room with unlocked door and an attendant outside, or a convalescing patient, to give notice of attempted egress.

Professional Discretion.—This is a matter of supreme importance to general practitioners. The Recorder of Birmingham has decided that I had no right to use mechanical restraint, it not being necessary for "medical purposes" under Section 40. Although I from the dock emphatically affirmed that in my discretion "rest" was a medical treatment, and was absolutely necessary to avert death, it mattered not. Although counsel cited Hack Tuke, Percy Smith, Deas, and Yellowlees—the latter of whom was said to be antiquated—it mattered not, the witness disagreed with all, and no more authorities were permitted to be cited. Now, if I have not any discretion, from whom must I get it, especially on an emergency. Must I ask the poor father of a child suffering from diphtheria for a stamped deed of indemnity against prosecution before I perform tracheotomy, lest some practitioner who only believes in intubation may witness against me, or the man who advocates antitoxin only, do likewise? Or must I demand the opinion of all the specialists around, requiring their fees in advance, lest some of them may appear against me in case I should be indicted? Or shall I proclaim myself an incompetent coward by abandoning the case? I know not. Medical witnesses in my experience act the part of prosecuting counsel. I hold the unique position, I believe, of having stood twice in the dock on professional grounds alone. The first time Mr. Justice Wills did not allow five hostile witnesses to impeach my discretion, saying that there was "an element of vindictiveness about which he could not speak calmly." He said practitioners were allowed almost unlimited discretion by all authorities on jurisprudence. This dictum would not have kept me out of prison last time, however.

Now in my fortieth year, I can truthfully assert that I have never shirked any case in surgery, midwifery, or gynæcology to which I was summoned. I fortified myself to meet each exigency. I never contravened the ethical code in the slightest degree. Then why this persecution? Shall my hair be turned white and the flesh worn off my bones by disturbed dreams of "docks" and visions of prison cells? Must I at forty abandon the profession in despair, with my youth gone, my spirits broken, and a financial wreck?

I am, Sirs, yours respectfully,

Oct. 21st, 1895. FITZWILLIAM R. A. EVANS.

[1] This figure appears to be as intended by the writer, though it is impossible to be certain from the copy, which in this respect is indecipherable.

"THE PHYSIOLOGY OF DEATH BY ELECTRIC SHOCK."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Aug. 3rd there is an interesting letter on the above subject by Dr. W. S. Hedley containing extracts from an important paper by Dr. A. M. Bleile, Professor of Physiology in the Ohio State University. Dr. Hedley has done me the favour to send me this paper, to some parts of which, not quoted by him, I shall presently refer. Dr. Bleile states that when dogs were killed by a strong charge of electricity the condition of the heart and bloodvessels examined immediately after death was always the same. "The left side of the heart was quite relaxed, the right side was intensely gorged with blood, as were also the large veins in the immediate vicinity of the heart. ..... It was also noted that deep and extensive cuts made in the tissues were free from blood, that the arteries were quite small and contracted, and that the blood was crowded into the very large veins in the trunk." These, then, are the main anatomical facts, which are very interesting and significant, but I find it difficult to accept Dr. Bleile's explanation of the phenomena. He says: "Taking these facts, it was suggested that the current acted upon the arteries through the nervous centre which controls their diameter. It is well known that the arteries are supplied with a middle muscular coat in which the fibres are circular, and their contraction would of course cause a narrowing of the artery, rise of the blood pressure, and a consequent impediment of the heart's action; in fact, it has been experimentally demonstrated that the arteries can be constricted to such an extent as to produce a rise of blood pressure which the heart is unable to overcome, and the circulation will stop from this cause." The chief defect in this statement is that the writer makes no distinction between the large arteries whose middle coat is mainly composed of elastic tissue and the

terminal microscopic arterioles whose middle coat is entirely muscular. The elastic resiliency of the larger arteries helps the heart to drive the blood onwards, while the contraction of the muscular arterioles impedes the onward passage of the blood, and so causes distension of the large arteries and of the heart's cavities. The emptiness of the systemic arteries and of the left side of the heart, which is said to be constantly found after death from electric shock, is certainly not the result of contraction of the systemic arterioles, and no physiologist can suppose that electricity excites such contraction of the large arteries as to arrest the circulation. The great distension of the right side of the heart and of the large veins while the left cavities of the heart are relaxed and the systemic arteries are empty is the condition which is found immediately after death from what is commonly called asphyxia, but which should be designated apnœa.

When the blood pressure in the carotid is measured and the heart of an animal is exposed during the progress of apnœa it is constantly observed that in the first stage of the process there is an increase of systemic arterial pressure with great distension of the left cavities of the heart; in the final stage the pressure in the pulmonary artery rises while that in the carotid is falling, the right cavities of the heart and the venous trunks become distended while the left side of the heart and the systemic arteries are almost entirely bloodless.[1]

The explanation of the facts is that, in the first stage, venous blood passing into the systemic arteries excites contraction of the arterioles, with resulting distension of the large arteries and the left side of the heart. In the second stage of apnœa the blood, having become entirely deoxygenised, excites contraction of the pulmonary arterioles, the result being that the trunk and large branches of the pulmonary artery, the right cavities of the heart, and the large veins are gorged with blood while the left side of the heart and the systemic arteries are empty. The arrest of the circulation by the extreme contraction of the pulmonary arterioles obviously explains the engorgement behind and the depletion in front of the obstruction. If we assume that the electric shock arrests the breathing by paralysing the respiratory centre the appearances found immediately after death are completely explained, and I believe that these appearances admit of no other explanation. Dr. Shettle, in his letter in THE LANCET of Sept. 14th, says: "The absence of oxy-hæmoglobin in the blood after death by electric shock is a fact beyond dispute." It is also beyond dispute that this condition of the blood is invariably found after death by apnœa; and it is inconceivable that the absence of oxy-hæmoglobin could result from the direct action of electricity upon the blood. It has been suggested that the heart's action is suddenly arrested by the electric shock; but if this were so there would not be the great disproportion in the amount of blood on the two sides of the heart which is said to be constantly present. After death from a sudden arrest of the heart's action the amount of blood on the two sides of the heart is nearly equal; but in cases of death from apnœa the right cavities of the heart are found immediately after death to contain about eight times as much blood as the left, the proportion being, approximately, that of ounces to drachms. In an annotation in THE LANCET of July 27th (p. 223) reference is made to the post-mortem appearances in a New York criminal executed by electricity. It is stated that "two quarts of blood escaped when the skull was opened." The annotator truly remarks that there is not room in the skull for so much blood. The explanation is that in opening the skull, which must have been done before the chest was opened, a large sinus or vein was wounded, and the blood escaped from the veins of the neck and trunk, which were over-distended in consequence of the arrested circulation through the lungs. If death had resulted from cardiac paralysis such copious hæmorrhage from excessive intravenous pressure would not have occurred.

Dr. Bleile in his paper argues that arrest of the breathing is not the cause of death from electric shock, because in no case did resuscitation result from artificial respiration; but this is a fallacious argument. In the few cases in which artificial respiration was practised the electric discharge was excessive, from 96 to 525 volts, and applied for from 2 to 10 seconds. These strong currents probably inflicted irrecoverable damage upon the nervous centre. Then it is notorious that, when suspension of the breathing—as, for instance, from an overdose of chloroform—is known to be, in some cases, the cause of death, the most prompt and persevering performance of artificial respiration too often fails to restore natural breathing. The respiratory centre has been irremediably paralysed. Dr. Bleile found that when a dog was made to breathe nitrite of amyl a stronger current of electricity could be given without being fatal. From this the author infers that "death in electric shock is entirely due to the fact that the current produces a contraction of the arteries through an influence on the nervous system, and that this constriction of the arteries throws in such an impediment to the flow of blood as the heart is unable to overcome, and that when drugs are given to counteract this effect much larger doses of electricity than the ordinary can be borne." There is, of course, a partial truth in this statement, but it is incomplete and, I believe, in one important particular erroneous. It is assumed that electricity excites contraction of the arteries by its direct action upon them through the nervous system. On the contrary, I maintain that the facts are consistent only with the theory that the contraction of the pulmonary arterioles, by which the circulation is finally arrested, is a result of the apnœal condition caused by paralysis of the respiratory centre. I have in this communication described the successive phenomena of ordinary apnœa, and in the paper in THE LANCET before referred to I have shown that when the arterioles have been paralysed by nitrite of amyl, by atropine, or by an overdose of curara the phenomena are greatly modified. There is no increase of systemic arterial tension in the first stage of apnœa, no resistance caused by contracting pulmonary arterioles in the final stage, and consequently no resulting over-distension of the right cavities of the heart. In consequence of the absence of pulmonary obstruction the circulation continues longer, and the animal's life is considerably prolonged.

I have been told by two friends—one of them a physiologist—that they have recently read the report of a patient having been rendered unconscious by lightning and restored by artificial respiration, but neither of them could remember where the report had appeared. If any of your readers can refer me to the report of that or any similar cases I shall feel greatly obliged.

There is, I think, an interesting analogy between the arrest of breathing by an electric shock and the respiratory failure which Mr. Victor Horsley has proved to result from intracranial pressure, from a violent blow on the head, or from a bullet wound of the brain.[2] Dr. Kramer and Mr. Victor Horsley have shown by experiments on etherised dogs[3] that as a result of a bullet passing through the cerebral hemispheres there is first a slight fall of blood pressure, followed by a considerable rise of blood pressure. This rise of systemic blood pressure, as we have seen, always occurs during the first stage of apnœa. The authors have found that in some cases of this kind death may be prevented by artificial respiration. The full report of their experiments will shortly appear in the Philosophical Transactions.

Before I conclude this long letter I beg permission to indicate the manner in which the inhalation of nitrite of amyl, in all cases of suspended animation from the various forms of apnœa, serves as a most influential adjunct to artificial respiration.

In the paper before referred to[4] the following experiment is described: "Into the trachea of a small dog, prepared with the chest and pericardium opened and kept alive by artificial respiration, a glass T-tube was introduced, through which nitrous oxide gas was passed into the lungs, whilst the expired gases escaped into the air. As usual, first the left, then the right, cavities became distended, and in one minute the heart's action had nearly ceased from over-distension of the right side. Then, without loss of time, inhalation of nitrous oxide, *impregnated with the vapour of nitrite of amyl*, was substituted for the pure N_2O, by means of a two-way stop-cock, and the result was that almost immediately the distension of the right cavities began to subside, and in two minutes they had nearly regained their normal size." This experiment shows that even while atmospheric air was excluded from the lungs by nitrous oxide gas the over-distension of the right cavities was removed by the relaxing

[1] See my paper on the Physiology of Asphyxia, THE LANCET, April 4th and 11th, 1891.

[2] Quarterly Medical Journal, July, 1894.
[3] Proceedings of the Royal Society, 1894, No. 335.
[4] THE LANCET, April 4th, 1891.

effect of nitrite of amyl upon the pulmonary arterioles. This clear demonstration of the action of nitrite of amyl shows the value of that agent as an aid to artificial respiration in all cases of suspended animation from apnœa. Whatever the primary cause of the apnœa, whether hanging or drowning, the inhalation of an azotic gas such as nitrous oxide or nitrogen, a blow on the head or mechanical injury of the brain, the shock of lightning or electricity—in each and all of these cases the relaxation of the pulmonary arterioles by the vapour of amyl nitrite has a double effect, (1) it immediately lessens the weakening over-distension of the right cavities of the heart; (2) by allowing the blood to pass on to the left side of the heart and so to the coronary arteries, the contractile power of the heart's walls, which had been impaired by anæmia resulting from the arrested pulmonary circulation, is increased. I am, Sirs, yours faithfully,

Savile-row, Oct. 14th, 1895. GEORGE JOHNSON.

"THE BATTLE OF THE CLUBS."

To the Editors of THE LANCET.

SIRS,—After many days it seems that the seed which some of us have been persistently, if somewhat feebly, sowing is taking root, and here and there springing up. We have to show that we are not acting selfishly, but as much in the interest of the sick poor as our own. Provident arrangements made in accordance with the just demands of the profession tend to encourage independence in the working class and to obviate pauperism. Provident arrangements forced upon the profession by syndicates and insurance societies on their own terms, and chiefly in their own supposed interests, pauperise the working class and degrade the profession.

Eastbourne, Portsmouth, Lincoln, &c., have become centres of revolt against impositions which have become unbearable. It is necessary now that the movement should become national and cease to be merely local. I would suggest that in each town and district throughout the country medical unions should be formed, and that each union should regulate the provident question in its own district on the lines of the Eastbourne arrangement, modified according to the needs of each locality. Existing friendly societies and medical aid associations can easily make arrangements with the practitioners of their district, and those of their medical officers who have earned the respect and esteem of their clients will at once step into a position of comparative independence with a chance of private practice. All that these societies have to do is to accept the "wage limit," to consent to a reasonable provident payment, and the principle that each head of a household shall choose his own medical attendant without the presence of canvassing or touting.

To accomplish this all that is necessary is united action in the profession. I am, Sirs, yours faithfully,

Loughborough, Oct. 18th, 1895. J. B. PIKE.

To the Editors of THE LANCET.

SIRS,—As medical officer to a medical aid association I beg to take exception to the *ab uno disce omnes* strain of Mr. Lionel Stretton's letter published in THE LANCET of the 19th inst. That certain abuses do exist in the management of several medical aid associations and that these abuses are countenanced by the medical officers I admit; but I am unwilling to acknowledge that this is the rule, not the exception. In order to justify the existence of these institutions we must consider the causes which led to their formation. In the first instance, medical men confided the care of their club patients to the tender mercies of unqualified assistants; secondly, club notes were frequently given to malingerers in order to secure their votes; and, lastly, cases of gross imposition were often winked at. To procure the services of a medical attendant whose qualifications would be guaranteed friendly societies were obliged to coöperate, and in order to make their medical officers independent of individual members, as a precaution against fraud, it was found necessary to pay a fixed salary. To prove that this state of affairs did exist I should not have to go a thousand miles from home, but could instance several cases not far away where the wives of club patients have been attended by unqualified assistants, and at present there is practising in the district an individual whose only pretention to qualification is that he was assistant to a local practitioner the greater part of whose club practice he managed for some time. That imposition by certain friendly society members has been winked at can be easily proved, for within a very short space of time I have examined for a society either nine or ten members certified to be suffering from various complaints; in only one instance was there the least evidence of disease or infirmity, and my decision—that with this single exception they were able to work—was disputed by only one member, who was afterwards examined by an independent medical man and expelled from the society.

Now, Sirs, I do not wish to justify the action of those medical associations that treat their surgeons as mere money-making machines; but I do say that friendly societies have a right to provide themselves with the best medical attendance for the money they can afford to spend; and, furthermore, I would add that in my opinion the dignity of the profession is as safe in the keeping of medical aid surgeons as it is in the hands of those whose only right to dictate is that the practice they purchased has been reduced in value by the action of the clubs. I have been medical officer to an association for over three years, and I challenge any medical man in the district to prove me guilty of the slightest breach of medical etiquette. Before medical aid associations were brought under the notice of the General Medical Council I wrote to Dr. Leslie Phillips offering to resign my position if he thought by doing so I would benefit the profession. I am still prepared to act in the same manner under a like condition.

I am, Sirs, yours faithfully,

N. L. USHER SOMERS.

High-street, West Bromwich, Oct. 20th, 1895.

To the Editors of THE LANCET.

SIRS,—I have no wish to prolong this correspondence, but must again assert that our balance on the year's (1894) working was £40, and not £200 as stated by you. Our receipts for 1894 was £989 10*s.* 2*d.* and payments £949 1*s.* 1*d.*, leaving balance on year of £40 9*s.* 1*d.*, as per my previous letter. I am, Sirs, yours faithfully,

WM. COULSON, Secretary.

Lincoln Oddfellows' Medical Institute,
Lincoln, Oct. 22nd, 1895.

*** We refer Mr. Coulson to the balance-sheet of the institute for the year in question and our words.—ED. L.

"HOSPITAL ABUSE AT BRIGHTON."

To the Editors of THE LANCET.

SIRS,—In the interest of accuracy I beg your insertion of a quotation in my letter of Sept. 24th side by side with Dr. Waring's deduction therefrom in your issue of Oct. 12th:—

"A searching 'scrutiny ..... showed that 96 per cent. of the cases (out-patients) were entirely fit and proper subjects for gratuitous treatment, and though in the remaining 4 per cent. sufficient information could not be obtained, it was thought that even in these cases, were closer scrutiny possible, it might be shown that several could be received without any abuse of the charity."

"According to Dr. A. J. Richardson ..... 4 per cent. of the cases which were treated were not entitled to charity."

In my above-quoted extract from the hospital report it is evident that, when the "several" who could be received without abuse are subtracted from the 4 per cent., 4 cannot remain. Having been a member of the sub-committee which drew up this very clause, I may explain that this 4 per cent. was made up of three groups: (1) the unfit for charity; (2) the cases which it was impossible to duly investigate; and (3) the cases it was inadvisable to further investigate for various reasons. Now neither I nor the secretary of the hospital have given the proportions of these three groups. I am, Sirs, yours faithfully,

A. J. RICHARDSON.

St. John's-terrace, West Brighton, Oct. 14th, 1895.

"OVER-OPERATING IN GYNÆCOLOGY."

To the Editors of THE LANCET.

SIRS,—I shall be glad if you will kindly allow me space to state that I was careful not to fall into the error suggested by Mr. Tait in his letter of Oct. 12th, and that I did not refer to operations undertaken for the relief of uterine myoma. I am, Sirs, yours faithfully,

Southampton, Oct. 22nd, 1895. JOHN F. BULLAR.

*** This correspondence must now cease.—ED. L.

THE BATTLE OF THE CLUBS.

(FROM OUR SPECIAL COMMISSIONER.)

(*Continued from p. 945.*)

"SWEATING" OF MEDICAL MEN AT LINCOLN.

THE figures given with regard to the number of patients seen and the amount of medicine dispensed by the five medical officers of the two dispensaries which the friendly societies have established at Lincoln show that too much work is done to be uniformly well done. There must be hurrying over the work somewhere and sometimes, and therefore I have urged that reform was needed in the interests of the patients as much as, or perhaps more than, in the interests of the medical profession. Now I have before me what might almost be qualified as a manifesto emanating from the friendly societies themselves, and setting forth how much reform was needed when a better system than the present one prevailed. What, then, must be the state of affairs now? Formerly there were at Lincoln only club medical officers who worked under the usual conditions. These officers undertook to provide medicine and attendance for the members of the clubs at an annual payment of 3*s.* 6*d.* per member. The medical officers were able to attend to their private practice, and their connexion with the members of the clubs helped to increase it. Young practitioners, by the care they devoted to the club patients, could make a reputation which led to advantageous private practice. This was a direct incentive to devote themselves to their club patients. But, on the other hand, there was the fact that the pay was miserably low, and consequently the temptation to neglectfulness sometimes proved irresistible. The need of reform was then acknowledged, though the reform adopted has in reality made matters much worse. Strange to say, it is in seeking to defend the present system that these facts have been brought forward. In answer to the attacks against the friendly societies' dispensaries the *Lincolnshire Echo* published on April 5th last a letter setting forth, on behalf of the members of the friendly societies, the reason which led to the abolition of the old system. The arguments adduced for this purpose are worth quoting and noting. The author of the letter in question wrote: "The abuses and neglect which crept in brought such a great demand upon the sick funds, and dissatisfaction amongst the members, whose constitutions were sacrificed and lives endangered, that a remedy had to be sought out. On inquiry it was found that attendance on a club patient was a secondary consideration with the club doctor. 'Club patients' were commonly relegated to the care of assistants, usually inexperienced and often unqualified. Hours of weary waiting in passages, kitchens, and other unsuitable and uncomfortable places increased the complaint and frequently terminated by the kitchen-maid telling them to call again. The address and the treatment in many cases were harsh, and the attendance, especially if the doctor happened to be a Poor-law officer, the same as that given to a pauper and as a matter of charity; all were supplied with club physic and club pills. Needless to say, there were many honourable exceptions to this manner, and Lincoln boasts of having years ago a record of medical men devoted to the work."

The sufficient answer to this extravagant charge against the club system is contained in the last lines of the description itself, which admits that in Lincoln there was a record of medical men devoted to the work. Angels must not be expected under such an exacting system as the old club or the new medical aid association system. The wonder is that the patients were so well served.

The friendly societies of Lincoln, however, instead of combining so as to improve the position of their medical officers, organised dispensaries where they obtain a much greater amount of work for a much smaller amount of pay. Formerly the whole of the 3*s.* 6*d.* went to the medical officer, now the friendly societies "sweat" a big profit out of this contract price. Formerly the merchant tailor had his own workshop. If 3*s.* 6*d.* was the price allowed for the labour of making a waistcoat it all went to the workmen employed there. Now the merchant tailor saves himself the trouble of organising a workshop and gives the cloth &c. and the 3*s.* 6*d.* to a sweater, who takes the whole to his den in the East-end of London. There, by the subdivision of labour and by employing starving Polish Jew refugees from Russia, the sweater gets the waistcoat made for less than 3*s.* 6*d.* and thus "sweats" his profit out of the labour he employs. The only difference, as I have already remarked, between the East-end sweater and the dispensaries of the Lincoln friendly societies is that the latter make a larger percentage of profit out of the 3*s.* 6*d.* That such profit is made out of the labour of medical men is admitted in the following sentence which I quote from the above-mentioned letter written in defence of the action of the friendly societies: "All lodges are not connected with these dispensaries, and some employ private practitioners, but to the disadvantage of the members and the funds of the society."

There is another very important admission made in this letter which fully justifies the fears that the growth of the friendly societies will deprive the medical profession of their present means of existence. The writer says: "Over 250,000—a quarter of a million—of our countrymen have allied themselves with these medical institutions. The membership and funds of the societies have increased and are increasing immensely, and not until they are able to provide for members from 'the cradle to the grave' will the leaders, managers, and supporters of these associations consider their work completed. Men of all classes are now allying themselves with friendly societies, from the peer to the peasant; bishops, clergymen, ministers of all denominations, politicians, Members of Parliament, members of our county and city councils—all unite to help forward these societies, which are founded on principles of thrift, self-reliance, self-help, independence, benevolence, concord, friendship, love, and truth."

It is very remarkable that this defence of the friendly societies embodies accurately the very complaints the medical profession makes against these organisations. As fully explained when describing the position of affairs at Portsmouth, there was a great readiness to give medical aid to ill bread-winners for a small sum per annum; but then it was understood that, so long as the bread-winner was able to work, he should pay a proper fee for the attendance given to his family. Cases where the fees for attending families varied from £1 to £7 a year were described, though the head of the family, as a member of the Manchester Unity of the Oddfellows (the same society that has established one of the dispensaries at Lincoln), only paid 4*s.* a year for the medical attendance he himself received from identically the same medical man. I pointed out that, while the club practice in one instance only brought in about 4*d.* a consultation or visit, it was the means of securing many visits or consultations at a fee of 2*s.* 6*d.* But if, as proposed in the above letter, everyone is to be a member from "the cradle to the grave," it is no longer a question of merely insuring the bread-winner, but the whole family. Whence, then, will the 2*s.* 6*d.* fees come that are the compensation for the cheap club work done and the only material inducement to attend to club work carefully, attentively, without hurry, and without undue economy in the matter of the drugs dispensed?

All that I have said so far does not, however, represent the principal grievance on which the members of the profession at Lincoln especially insist. Their great complaint is that a large number of leading tradesmen and well-to-do men of independent means avail themselves of the friendly societies and obtain medical aid for 3*s.* 6*d.* per annum when they are well able to pay proper fees. In the face of this disgraceful fact the champion of the friendly societies is so blind to the points at issue that he deliberately boasts that "men of all classes" join the friendly societies. That is just the grievance. A gentleman who was formerly Mayor of Lincoln and is now alderman, is a leading member of the Oddfellows. Nor is he merely an honorary member, patronising the institution from benevolent motives; but he receives the medical benefits just as if he was a poor working man instead of a wealthy, successful tradesman and one of the most prominent citizens of the town. It has been calculated that last year, in exchange for the paltry club subscription amounting to only a few shillings, this gentleman and his family received medical attendance and medicine which, at the rate of 2*s.* 6*d.* per visit, would have amounted to £35. As, however, a person in his position might well be called upon to pay 5*s.* per visit, it may be said that through the connexion of this one family with a benefit society the medical profession has lost £70 in one year. Far from denying this gross abuse of an institution created to help poor

working men, the letter above mentioned actually confirms the fact by stating that "members of our county and city councils all unite to help and forward these societies." Further, it should be mentioned that when the General Medical Council held an inquiry into this matter the gentleman in question actually went up as a representative of the Lincoln Oddfellows. Another member of the Lincoln town council was a member of a benefit society, and his wife and children were attended by the club medical officer. He has now, however, recognised the false position he occupied and has sought the advice of a private practitioner, leaving his club officer to attend to the poorer members of his society. Among the various persons pointed out to me as being in receipt of medical aid from friendly societies were a master printer in a large way of business and several rich butchers. One of the latter has retired from business and lives in a handsome villa. Some master tailors, two of the principal tobacconists of the town, a person holding a high position in a foundry and earning a good income, the proprietor—or, at least, the manager—of a large hotel, a young man who is earning a good income in the beer trade, and even a dispensing druggist were all mentioned to me as being in receipt of medical aid, though they can well afford to pay proper fees. A practitioner who for many years had been in the service of one of the friendly societies dispensaries said that he was then obliged to see from eighty to ninety patients per day, and was convinced that at least 10 per cent. of these members of friendly societies could well afford to pay the usual fee for medical attendance, and had therefore no right to claim medical aid.

The presence of so many prosperous and wealthy tradesmen and others on the books of friendly societies, not merely as patrons or as participants in financial benefits, but as claimants of medical aid, is not only a great injury and injustice to the medical profession, but it is also very detrimental to the interests of *bonâ-fide* working men and to others who are morally or rightfully entitled to medical aid by reason of their slight resources. The well-to-do members of the friendly societies, being better educated, more skilful administrators, and better writers and speakers, have naturally been elected on the managing committees of these organisations. It has been urged that not only does the system tend to make medical men neglect the great crowd of patients that come upon them, but that it also tends to make the medical officers give far more attention to some of the patients than to others. Surely, as the payment is the same the treatment should be the same, but this is said not to be the case. What, then, has become of the brotherhood of which these societies boast? The medical officers of these dispensaries have to spend an undue amount of time in visiting members of the committee and their middle-class friends. They have, consequently, less time to give to the more numerous but poorer members of the society. It is a beautiful picture for the British workman to contemplate. This sworn adversary of the sweating system, this friend of fair play and a fair day's wage for a fair day's work, has elected to manage the friendly societies organised for his benefit a number of shopkeepers, small capitalists, and other middle-class men, who only pay the same subscription as the workmen. It was even proposed that one of the medical men should stop in apart from the ordinary consulting hours so as to receive the better-class members, though it was never proposed that for this extra accommodation and privilege the annual subscription should be augmented. There are to be first-class patients, but all are to pay third-class fares. It was on this point that one of the medical officers employed at Lincoln resigned. He had to attend morning and evening at the dispensary to give medical advice to the members of the society, and the waiting-room was then crowded with working men and poor people. The wealthier members did not like to come there and mix with a rough crowd, therefore they proposed that the medical officer should stop in during the afternoon so as to receive them. The medical officer, however, refused to sacrifice his afternoons so as to see some half-dozen well-to-do members who, in spite of their wealth, did not pay higher subscriptions than the workmen. Ultimately this medical officer had to resign because he did not sympathise with and help the wealthy members of the society who were anxious to receive medical aid for the 3*s.* 6*d.* per annum workmen pay, but would not put up with the rough accommodation and surroundings workmen have to endure. With the dispensers the grievance is the same as with the medical officers. The wealthy members do not like to wait in the crowd for their medicines, so they want the dispenser to stay after hours and give them their medicines separately and in a more select company. Such is the brotherhood of these dispensaries. The middle-class committee-men have introduced, for their own benefit, a system of privilege which is to the advantage of their own class, but is paid for out of the funds which, in the main, are provided by the working class. If someone gets more than his share someone else has to suffer. In this case it is the poorer members of the societies who pay for the richer members. A well-to-do tradesmen, the owner of house property, pays 3*s.* 6*d.* a year and 8*s.* for all his family. When he is ill the medical officer hastens to his house, a servant opens the door, keeps him waiting, and a good quarter of an hour is devoted to this one case. As a natural consequence, the workman hard by, who pays exactly the same sum, is treated with much greater haste. Being a workman, and feeling that he is not paying much for his medical attendance, he does not keep the medical officer waiting and is grateful for what attention is bestowed on him. He would not, however, be so contented if he realised that the visit was brief and hurried because too much time had been devoted to the wealthy brother member who lives in a luxurious villa.

Fortunately, there are at least a few working men in Lincoln who are beginning to realise how serious a grievance this inequality of treatment has become. Unfortunately they are, for the most part, but poor speakers, and though they feel very sore on the point they have not yet plucked up the courage to attack the managing committees. The rank and file of the friendly societies are sadly in want of leaders and speakers. If such leaders were forthcoming the privileges which middle-class families enjoy as members of friendly societies and at the expense of their poorer fellow-members would soon be swept away. The working-class element would also, I am convinced, indignantly abolish the sweating system. It cannot be repeated too often that medical aid is only justified within a certain wage limit, and that if wealthy members are admitted abuses will arise that are not only detrimental to the interests of the medical profession, but are equally injurious to the well-being of the working men themselves.

If the working men will not take action it is difficult to say what, for the moment, can be done to prevent this state of things. It is no use attempting to persuade the five medical officers of the two dispensaries to resign till there is such organisation or unanimity of feeling among the profession throughout Great Britain as to prevent other practitioners taking their positions. Public and professional opinion has to be further stirred and moved on this question. In the meanwhile perhaps a list might be published of wealthy persons who avail themselves of the medical aid organised only for the poor; and certainly an appeal should at once be made to honorary members of the societies who have lent their names so as to strengthen what they imagined were merely benevolent institutions. The Bishop of Lincoln is, I am told, an honorary member of one of these bodies, and yet it is very certain the reverend Bishop does not mean by this to signify that he approves of the sweating system. Pressure from above and pressure from below could be brought to bear upon the managing committees till they are compelled to establish a wage limit. If this is not done then the medical profession will have to discover some means of preventing qualified practitioners from accepting office in dispensaries where the sweating system is enforced and no wage limit is established.

Lincoln, October.

SOME OF THE HOSPITALS IN NORTHERN ITALY.

(BY A HOLIDAY CORRESPONDENT.)

Ospedale Maggiore in Milan.

DR. GRANDI, the medical director of the Milan Hospital, kindly gave me his last report, which consists of 285 pages, being chiefly statistics very carefully worked out. It is dated 1894 and refers to the three years ending in 1891. The Italian custom seems to be to publish statistics only every three

or five years, and then somewhat tardily. The annual admissions on the average of these three years are 22,735, with 2828 deaths. The daily admissions vary from 15 on Christmas Day to 120 in August, and the deaths from 1 to 20 per day, while the average number of in-patients ranges from 1852 to 2456. In one year as many as 1087 cases of small-pox were treated, of which 63 broke out in the hospital. The average diphtheria patients number 296 in the year, including 17 which arise in the wards, and the death-rate is 47 per cent. Typhus fever would seem to be rare, for only 5 cases are admitted annually. There were only 17 cases of measles, 15 of scarlet fever, and 21 of whooping-cough. There is a special report on Dr. Visconti's work with Koch's tuberculin, which is now no longer employed. The summing-up briefly is that it is useless as a cure for tubercle, but of value for diagnosis, especially in the case of animals. Dr. Visconti spoke to me very highly of Koch's work, and believes that to him is due the credit of initiating the system of serum injections, of which that for diphtheria is a natural sequence. The great prevalence of enteric fever in Milan calls forth a very interesting report. There are 559 cases a year treated in one military and three civil hospitals, with a death-rate of 12·6 per cent. Besides this there are 147 deaths from enteric fever in the town, and if it is supposed that the mortality in the town is the same as that in hospital about 1176 cases must be added to the hospital ones, and this figure will, perhaps, include mild cases not diagnosed. This gives an annual total of 1735 patients with 218 deaths certified from one preventable disease alone in a town of 315,000 people. On investigation it appears that half the patients suffering from enteric fever come from seven of the forty-one parishes of the town, and, further, that these seven districts are intersected or surrounded by old canals—now open drains. No less than 1069 "delirious" patients are admitted to the Ospedale Maggiore in the year, besides 315 lunatics. The number suffering from scabies is 646. During the three years in question there have been 49 ovariotomies, with 8 deaths. The annual admissions include 150 "drunk" and 67 patients who attempted suicide, mostly men between twenty and forty years of age; also 15 cases of hydrophobia were treated during the three years. Since 1889 there has been an anti-rabies institute at the hospital, 97 cases having been treated in 1890 and 157 cases in 1891. The pathological laboratory was opened in 1868 by Dr. Visconti and has been under his superintendence since. The chief causes of death found in the large post-mortem room, which is furnished with five tables, are in the following order: tubercle of lungs, senile decay, pneumonia, broncho-pneumonia, diphtheria (occurring all through the year and chiefly in children under ten), and, lastly, cerebral hæmorrhage. But in a year only about 610 necropsies are accurately made. Besides ordinary notes a register is kept giving a *résumé* of the post-mortem examinations, and also a reference by numbers to other books where very thorough details are written of the clinical notes, microscopical results, and museum preparations. When a patient dies in the wards he is kept in his bed for three hours, and then for a further period of six hours on one of ten beds in the deadhouse. Each of these beds has at its head an electric bell rope, and the porter told me that he had been called up by this bell six times in the last six years, each time occasioned by some increase of rigidity in the corpse. Dr. Visconti and his assistants also examine under the microscope all clinical material sent to them from the wards, and of this work accurate registers are also kept. I was thus able to see at a glance how many times the eggs of various entozoa had recently been discovered in the fæces of in-patients. There are some out-door charities in connexion with this hospital, the most important of which provides for the care of 32,000 patients a year at their own homes, the average visiting list numbering 246 per day. No modern hospital report is complete without a reference to influenza, and here there is a list of 38 epidemics which have occurred in Italy, going back to December, 1173, and March, 1259.

Mombello Lunatic Asylum.

This is the chief madhouse for Milan province and is distant one hour's journey by train from that town. It merits a short description because it is the best hospital which I met with in the north of Italy. It has been ably superintended for the last thirty-two years by Dr. Gonzalez, who most kindly devoted a whole afternoon to showing me round. He told me he was an ardent disciple of Conolly and glories in having almost abolished restraint. His method, which is suited to his own generous enthusiasm, is to treat all his patients like children, patting their cheeks and listening for a moment to each of them. Needless to say he knows every one and they all brighten up at his approach. However, I saw another side to his character when he thundered at an old monomaniac who had just written him a threatening letter. On the whole, asylum physicians seem to require very little protection, and indeed get very little from the untrained attendants during their rounds. It must be remembered there is no Broadmoor in Italy, and every county asylum contains a dangerous homicide or two. The hospital consists chiefly of nine pavilions for patients, besides all necessary offices, connected by a narrow-gauge line for trucks. There are 1422 patients, and the attendants are reckoned at the rate of 1 in 10 for ordinary cases and 1 in 3 for the excited ones, religious sisters being strongly disapproved of by Dr. Gonzalez. He has six assistants lodged in the central building, once a palace and inhabited by Napoleon I. It stands on a commanding hill and is surrounded by forty acres of land, partly tilled by the patients, some of whom I also saw weaving, tailoring, plaiting, and making maccaroni. The mattresses of the beds were stuffed with seaweed (zostera marina) from Genoa, which, besides being very cheap, is antiseptic and does not harbour insects, and also cannot burn when lighted by an ordinary match. Among the patients in the gardens and the workrooms and playrooms I saw several general paralytics and many pellagra insane, both men and women, and in one airing court I was suddenly addressed in English by a Maltese who had a chronic alcoholic history. About 1 patient in every 70 had more or less goitre, and there was a well-marked hermaphrodite aged fifteen years in the female wards suffering from melancholia. There were also among the show cases 3 microcephali, 2 of them being brother and sister. They knew each other when brought into the same room, and kissed sadly and noisily.

Lunatic Asylum at Voghera.

An hour's railway ride from Milan in another direction there is the asylum for the province of Pavia, under the superintendence of Professor Raggi of the University of Pavia, who good-naturedly placed himself at my disposal. He has two resident assistants, and the attendants are calculated at the rate of 1 to 10 patients. The average number of patients is 470 and the annual death-rate is 66. In going through the wards I noticed that many were tied in bed with a stout band or in camisoles, and in the infirmary ward I counted sixteen men so tied, including several general paralytics. However, this is chiefly for the convenience of the attendants, and a daily list is kept of the restrained epileptic and the workers. For instance, on the day previous to my visit 5 men and 5 women were reported as "clamorous," 16 men and 7 women were under restraint, 4 had epileptic fits, 11 had been violent or had received bruises, and 2 women were menstruating; 70 men and 105 women were on the workers' list, while 200 men and 111 women were from various causes declared to be unable to work. Professor Raggi showed me an interesting collection of skulls and of brains preserved by the Jaccomino method. I learnt at this asylum and others that there are no visiting lunacy commissioners, and also that there is no general lunacy law for Italy, though Crispi has tried to introduce one. Every province has its own local regulations, and in most of them one medical man's certificate is enough to insure admission into an asylum. Much good work is being done by the medical men of North Italy, but they have not yet been carried very far on the modern waves of asepticism, hygiene, and scientific nursing. It is this latter which prevents the notions of restraint in asylums from being quite up to English date.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

The Privileges of Benefit Societies.

IT is well for the working man to bear in mind that in insuring his life in a benefit society he is bound by the rules of the society, and that there are liabilities as well as benefits entailed by his membership. These facts were strikingly illustrated in a case recently tried at the county court. A man sued the secretary and trustees of Court Friar Tuck of the Ancient Order of Foresters for £3 5*s.* which he claimed as arrears of sick pay; the answer to this claim

was that the plaintiff had forfeited the amount under the rules of the Order. According to the rules any such question in the first instance had to be referred to arbitration, with an appeal from the lodge to the district, and so on until a final court of arbitration was reached. Instead of this the plaintiff had gone direct to the county court. The judge there informed him that at this stage there was no jurisdiction to help him. He might come back to the court, but people who joined voluntary societies must abide by the rules. The law is ready to provide a remedy in cases of unfair advantage or ignorance, but it is well that a reminder of this kind should be thoroughly known by those who join for prospective but mutual benefits.

Queen's College.

Since the removal of the medical faculty from this college things have gone on in a bad way. At the annual meeting summoned a few days since only four out of thirty-two governors put in an appearance. There was consequently no quorum. The same thing happened at the previous annual meeting. It seems that the college has now only nine students, and that during the last year there were but three entries. The saying of a deceased physician appears to be likely to be realised when he observed some years ago that "the grave of Queen's College was dug, and he, the grave-digger, stood at its side." Certainly theology left to itself does not flourish unassisted by the departments which were transferred to Mason College.

Insanitary Dwellings.

In one instance lately brought under the notice of the authorities the skeletons of two children were found in a cellar of a house. The owner carried on the business of an undertaker. The excuse offered was that the bodies had been received for burial, but the amount paid in such cases was so small that he only made a journey to the cemetery when he had a number to bury. The two bodies discovered were brought in a year ago, and although he had the certificates of death he did not cause the remains to be interred. Evidently any stick will do to beat a dog with, but an excuse of this kind ought not to be taken for the violation of a duty not only to the parents of the children but to the community at large. For another instance a man was summoned for having in his occupation a railway carriage in such a state as to be a nuisance or injurious to health, and so overcrowded as to be injurious to the health of the inmates. The carriage was divided into three compartments, with a total length of 20 feet and an extreme breadth of 7 feet. Exclusive of furniture about 280 cubic feet were allowed for each of the two occupants. An order was made for its removal. It is true that many people live in worse conditions than thus represented, but this does not alter the facts as pronounced by sanitary laws.

Midland Medical Society.

The inaugural meeting for the present session is to be held on Nov. 7th, when Dr. W. S. Playfair will give an address on the Nervous System in connexion with Diseases of Women. From the well-known work which Dr. Playfair has done in this direction, and the popularity of the society, a large meeting is expected.

Oct. 22nd.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Port Sanitary Authority for Manchester.

THIS important question has advanced a step further. A conference of riparian authorities along the banks of the Ship Canal was held a week ago in the Lord Mayor's parlour. It was convened by an order of the Local Government Board, which was represented by Dr. Barry, one of the inspectors. He explained that under the Public Health Act of 1875 every sanitary authority bordering upon a waterway had certain duties imposed upon it with regard to the passing of ships and the health of the people on those ships, which, for the time being, were regarded as houses. There were also the Cholera Orders of the Local Government Board to be observed by these riparian authorities, acting in concert with the Revenue or Customs House authorities, and thus forming the first defence against the introduction of cholera into this country. He pointed out that where there were numerous authorities it was an advantage that there should be one responsible for carrying on the work. In the Manchester port there were sixteen or seventeen authorities, some on the Canal and some on the Mersey, and it was at present the only one in the country without a port sanitary authority. As to the "plant," as he termed it, a medical officer of health and one or more inspectors of nuisances would be required; also hospital accommodation and a mooring station where ships could be disinfected. Dr. Barry suggested that an arrangement might be made with the Liverpool authorities, who had an admirable station of the kind in the Sloyne. It would be difficult to find one altogether suitable in the Canal. Mr. C. H. Beloe, deputy chairman of the port sanitary authority of Liverpool, said it was vitally important that an infected vessel should not enter the tideless waters of the Canal; so that Manchester would have to do the work of inspection at the Customs station in the Mersey, and the Liverpool authorities might possibly object to two jurisdictions in the tideway. It had suggested itself to him that the authority of the port of Liverpool should undertake the work of examination with regard to infectious diseases, leaving to Manchester the ordinary sanitary inspection on the arrival of vessels in the Canal. The only question would be what proportion of the cost of the Liverpool work the Manchester authority should bear. Alderman Walton Smith, chairman of the Sanitary Committee, and Alderman Mark spoke of the offer Mr. Beloe had made on behalf of Liverpool as being most generous. A motion to the effect that a Manchester port sanitary authority should be formed was carried *nem. con.*, and also one that representation should be in proportion to contribution.

Waste Products in the Streets.

Numerous "orderly boys" are to be seen in the streets sweeping up horse droppings and other rubbish all the day. This certainly is to be commended. At the last meeting of the council, however, it was moved that the Cleansing Committee should report on the advisability or otherwise of providing on the footpaths suitable receptacles in which pedestrians—as the resolution somewhat pedantically has it—may deposit waste paper and other waste materials. It was said, on behalf of the committee, that some time ago receptacles were provided for the purpose, but "people mistook them for post-office pillar-boxes and put their letters in them." It is not surprising, therefore, that the resolution was lost.

Grant to the Manchester Museum.

The discussion on this subject was resumed at the council meeting last week, and, after a series of speeches nearly as long and impassioned as those which preceded the loan of several millions to the Ship Canal, it was decided, happily for the credit of the corporation, to grant the sum of £400 a year to the museum, as recommended by the Free Libraries Committee. This committee spent last year £19,703, while the amount that would be raised by the rate to which it is entitled would be £24,186 a year; the grant, therefore, will not cripple the libraries. As the benefits of this free museum, said by Sir W. H. Flower to be in some respects one of the best in the country out of London, extend over a wide area, it may be hoped that the county councils of Lancashire and Cheshire will give some help.

Extension of the Infirmary.

The resolutions of the grand committee, reported last week, do not mark any great advance. Instead of deciding on a definite course all the ground is again to be traversed. No doubt it is a serious matter to determine on rebuilding at a cost of £200,000; but there is reason to hope that the money will not be a serious difficulty. It would, however, give an opportunity for clearing away from the foundations all the old soil saturated with sewage, and all the remains of the porous brick drains of former days, and of starting afresh rid of this ancient filth. The plans for the wards, their adjuncts, and the administrative quarters could be arranged in the best possible manner, untrammelled by the defects of the present building. The alternative schemes for patching up or putting on another storey—almost unanimously condemned by the medical staff—would perpetuate many evil things, such as long dark corridors communicating with each other all over the building and preventing the possibility of isolation, and would do away with all chance of a clean foundation. Much has been done, at great cost, to improve the sanitary arrangements and condition of the present building, but the defects of construction are radical. If these schemes

are adopted for the sake of cheapness the result will ever remain a disappointment and a failure, and the principal hospital of Manchester will be a monument showing how far she has lagged behind the knowledge of the time and how she has allowed the provision for the sick and for clinical work to stand contrasted in their poverty with the splendid appliances for teaching at the Owens College.

Oct. 22nd.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Villa Garden Settlements.

THE Northern Allotments Society has purchased an estate of 215 acres at Stocksfield to be converted into a villa garden settlement. This is the third estate the society has purchased and laid out in the near neighbourhood of Newcastle within the last few years, so that it may be concluded the former ventures have been successful. The Stocksfield Estate has been divided between sixty-six owners. The object of the society is to induce dwellers in Newcastle and the district to build and to occupy houses on portions of land of not less than one acre in extent. This is an excellent movement, and one which, as the crowded business centres of our large towns cease to become residential, is likely to be imitated wherever facilities for villa garden settlements exist.

Is Crime Decreasing?

Mr. J. T. Wharton, the able and experienced chairman of the Durham Quarter Sessions, thinks that it is, as the number of persons now brought before him is considerably less than it was some years ago. The *Newcastle Daily Chronicle*, however, demurs to the conclusion, and points out that a smaller number of prisoners does not necessarily prove that there is less crime. In support of this contention the amount of undetected crime in the country generally, and in the North particularly, is cited. It appears that in the immediate neighbourhood of Newcastle during the last few years at least five undoubted murders have been committed and no one has been made responsible. We hoped that education would diminish crime. Can it be possible that criminals are now sharper than they were in avoiding detection, or is there something wrong with our means of detecting crime?

High Death-rate in the North of England.

For the last few months the death-rate in the usually healthy borough of Sunderland has been abnormally high, owing chiefly to an outbreak of typhoid fever, as to the cause of which a Government inquiry is being held. It is not in Sunderland only, however, that a high death-rate prevails just now. In the district governed by the Morpeth rural council, the greater part of which is agricultural and pastoral, a mortality of 31 per 1000 is officially reported. This high death-rate is not due to zymotic disease, and the mortality is chiefly among children under five years of age, the causes of death being returned as diarrhœa, debility, and wasting. In the colliery villages of Ashington and Hirst the rate of infantile mortality is particularly high, being at the rate of 30·6 in the former and 54 per 1000 in the latter place.

The Tyne Piers.

After upwards of thirty years' continuous work these magnificent piers at the entrance of the river are finished. Lord Salisbury, the Duke of Devonshire, Mr. A. Balfour, and Mr. Goschen have all been asked to declare them open on Nov. 6th, but unfortunately none of these distinguished statesmen is able to accede to the commissioners' request, and consequently it has been determined to postpone the function till May, 1896. It has been suggested that the Prince of Wales might then be willing to perform the ceremony.

Wear Valley Extension Railway.

A long-talked-of project has just been completed. This line, some nine miles in length, made by the North Eastern Railway Company, from Stanhope to Wearhead, has this week been opened for traffic. It runs through a very beautiful district, hitherto not easily accessible, and in addition to opening up an isolated neighbourhood it is hoped that it may be the means of doing something to revive the now almost extinct industry of lead mining in Weardale, and thus preserve from extinction a stalwart and estimable class of men—the Weardale lead miners.

River Tyne Port Sanitary Authority—Resignation of Dr. H. E. Armstrong.

Dr. H. E. Armstrong has resigned his appointment in connexion with the above-named authority, and his resignation has been accepted. Dr. H. E. Armstrong has acted as medical officer to the Tyne sanitary authority for fifteen years, and resigns in consequence of a desire having been expressed by the town council of South Shields that the medical officer should reside at the mouth of the river, and not in Newcastle.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Opening of the Winter Session at the Edinburgh University.

THE winter session of the Medical School of Edinburgh began last week. In the University several of the professors delivered introductory lectures on subjects of current interest. Sir Thomas Grainger Stewart, in the class of practice of medicine, discussed the Nauheim treatment of heart disease and the treatment of tetanus and diphtheria by means of antitoxines. He traced the discovery of these and quoted statistics showing the value of the treatment in diphtheria. He also referred to some of the unpleasant symptoms which sometimes followed the use of antitoxin. He likewise alluded to the difficulty of preparing the antitoxin, and thought that failure might in some instances be due to the inferiority of the antitoxin employed. He spoke of the certainty that other antitoxins would be discovered, and paid a warm and suitable tribute to those who had done so much to develop this side of science. In the class of midwifery Professor Simpson reviewed the history of the chair since its inauguration in 1726. He believed it to be the earliest instituted chair of midwifery in any university. At the close of his lecture he referred to the death of Dr. Thomas Keith, who was one of the most illustrious of the men Sir. J. Y. Simpson trained. Dr. Keith and Dr. Mathews Duncan were assistants to Sir James Simpson at the same time, and they both took their share in the experiments that resulted in the discovery of the anæsthetic properties of chloroform. After graduating Keith was house surgeon to Professor Syme, who recognised his rare surgical gifts. He joined his brother, Dr. George Skene Keith, in practice, and was largely engaged in general practice before he devoted himself to the class of operations which had given him a world-wide fame. It was curious to note the influence of the two masters on the career of a pupil in whom they both took pride. Syme trained his surgical instincts, and Simpson gave them direction. Syme and the surgeons of Edinburgh generally condemned the operation of ovariotomy and denounced the operators; Simpson and the obstetricians generally maintained its justifiability and encouraged the younger men to operate. There were long and keen debates on the subject in the Medico-Chirurgical Society, and it was owing to the success of Keith's first six cases, which were laid before the society in 1863, that the opposition was silenced. In pathology Professor Greenfield, and in surgery Professor Chiene, dwelt upon Pasteur and his work; Professor Chiene also referred to Dr. Thomas Keith's work in surgery.

Professor Annandale's Health.

I am glad to be able to state that Professor Annandale has made so much progress towards recovery that he has been able to meet his clinical surgery class.

Scarlet Fever in Edinburgh.

Scarlet fever is endemic in Edinburgh, as it probably is in all large centres of population. In Edinburgh, owing to compulsory notification, the majority of the cases are known. From time to time the disease becomes more widely epidemic; in fact, as soon as a fresh supply of susceptible children pass from infancy this takes place. Occurring at this season of the year, it necessarily interferes grievously with school attendance, and children attending school are doubtless more liable to meet infection than if they were carefully kept at home. But if it comes to be a question between attending school and playing about the streets and closes I doubt if the former is as bad as the latter. Some nervous people think that an epidemic of scarlet fever would cease if Board schools were closed, but I fear that no such simple remedy would suffice. Every year almost there is

more or less of an epidemic extension of the disease, and not much is heard of it until it invades the better quarters of the town, but when it does people write to the newspapers and express surprise that sanitary officials cannot prevent this and make suggestions as to how it might be avoided. All this may have its good side, but until the parasite of the disease is discovered we are not likely to see scarlet fever successfully held in check. In Edinburgh at the present time there has been the usual outcry, and the extent to which the city hospital is being used has given people the idea that the epidemic is exceptionally bad, and they cry out for additional measures for repression. The extreme infectiousness of the disease, the difficulty in securing sufficient isolation, the indifference of the great bulk of the lower classes to the risk of infection, and the fact that many mild cases are allowed to associate freely with other children make the stamping out of scarlet fever, or even the restraining of its extension, practically impossible with our present knowledge.

Death of Dr. Messer.

Dr. John Cockburn Messer, Deputy-Inspector-General of Hospitals and Fleets, Royal Navy, died last week in Edinburgh. He was a graduate of Edinburgh of 1851 and a Fellow of the Royal College of Surgeons of Edinburgh, and had seen a good deal of service.

Lectures to Sanitary Inspectors.

Dr. T. Pearson Munro, lecturer on public health in Anderson's College, Glasgow, is to give during the winter a series of lectures and demonstrations to the sanitary inspectors of the city on Chemistry in its application to Sanitary Work.

Medico-Chirurgical Society, Glasgow.

At a meeting of this society on the 18th inst. Dr. Geo. S. Middleton gave a clinical demonstration on a series of nervous cases. The following cases were included in the demonstration: (1) a child with spastic diplegia and athetoid movements; (2) a young woman with post-hemiplegic athetosis; (3) a man, the subject of acquired syphilis, with bilateral facial paralysis and absolute deafness; (4) a case of old-standing facial paralysis, with contracture and secondary over-action; (5) a woman with bulbar paralysis, muscular atrophy, and increase of reflexes; (6) a boy with peripheral neuritis due to administration of liquor arsenicalis; and (7) a man who had recovered from severe peripheral neuritis, but in whom the knee-jerk was still absent.

Oct. 22nd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

St. Vincent's Hospital, Dublin.

THE address at the opening of the medical session at St. Vincent's Hospital was delivered by Mr. R. F. Tobin, F.R.C.S. Irel., surgeon to the hospital, who took for his subject Some Questions of Medical Education, urging upon his hearers the supreme necessity of acquiring the faculty of observation in the hospital wards, and assuring them that without cultivated powers of observation no mere book knowledge can be turned to use in the practice of their profession. The first two years of the five years' curriculum are almost altogether occupied in the Dublin school with the study of sciences that form the foundations of medicine—viz., anatomy, physiology, physics, and chemistry. During the third year, however, students can give a great deal of attention, and during the fourth and fifth years almost their whole attention, to medicine and surgery proper. There are thus two stages in the curriculum—a preliminary scientific stage and one devoted directly to medical problems. Students, however, do not spend their time during this second stage to the best advantage, for in place of applying themselves wholly to hospital practice they are obliged to attend the schools for theoretic lectures in medicine and surgery and for examinations in connexion with these lectures, and these so dominate their views that even in the hospital wards many of them are on the look-out for answers to examination questions rather than interested in watching the changes in the patients. The student is reluctant to make records of cases, for he knows that, from an examination point of view, it does not pay, and if towards the conclusion of his course he is offered the position of resident pupil in a large and busy hospital he often refuses it, because he is going in for his "Final," which it is essential to pass. Medical education, therefore, notwithstanding a large amount of hospital attendance, is literary rather than practical, and this system has the serious defect of neglecting the faculty of observation. This undesirable state of affairs has been brought about by the circumstance that the regulations require the theory of medicine and surgery to be condensed each into a course of fifty lectures, and at the same time refuse to recognise systematic theoretic lectures given in hospitals in conjunction with practical work. The obvious remedy is that regulations shall be issued applying to the teaching of medicine and surgery the same principle that has been applied to the teaching of all other arts and sciences—the principle, namely, of making theoretic and practical work go hand in hand. Knowledge obtained by the observation of cases is deep, abiding, and useful, in comparison with that which is reached altogether through words.

If it is right for a student to receive his medical and surgical training at a hospital, it follows that his hospital teachers should have a voice in his qualifying examinations, assessors from the Licensing Body whose qualification is sought, of course, attending such examinations. These changes in the method of conducting medical education would not be difficult to carry out, and their effect would be far-reaching. The objections urged against them are chiefly two, the first being that the clinical teaching in hospitals is not sufficiently full and systematic to warrant the abolition of theoretic lectures in the schools. But these lectures, though only fifty in number for medicine and for surgery, are supposed to complete the education of the student in these most extensive subjects, and so hospital teachers, relieved from the responsibility of giving systematic instruction, tend to "walk the wards" with their pupils in a rambling and drifting fashion. The second objection is that hospitals do not possess museums, such as are attached to some of the schools, the specimens of which are useful in illustrating lectures. The answer to this is that in hospitals there are specimens of both life and death, of men and parts in which disease is active, and of men and parts in which it has done its work. Another superiority of hospital teaching over museum teaching in this branch of study is that in the former the natural average proportion of the various classes of disease is maintained; but in the latter there is no such proportion, for museums abound in curiosities and despise common things. Museums are of use for the purpose of making additions to existing knowledge, but not for the laying of its foundations.

The Rotunda Hospital, Dublin.

On Wednesday afternoon, Nov. 27th, the new wing of the Rotunda Hospital will be opened by her Excellency the Countess Cadogan in the presence of a large and representative assembly of the citizens of Dublin. On the previous evening, the 26th, a conversazione and Cinderella dance will be held in aid of the complete equipment of the new wards and building.

The Fatality at Jervis-street Hospital.

A man named McNamara, who was accused some months ago of negligence in causing the death of a gentleman who stepped into the shaft of the lift at the Hôtel Métropole, Sackville-street, recently attempted to commit suicide, and was accordingly confined in Jervis-street Hospital under the charge of two members of the police force. He managed, however, to elude their vigilance, and jumping through a window fell some forty feet, sustaining injuries which proved fatal in a few hours. The case of Mr. McMarr, the gentleman who was killed at the Hôtel Métropole, was somewhat remarkable from the surgical point of view. It was proved at the inquest that he had fallen a distance of only eight feet and a half, and that he was found standing at the base of the shaft. The injuries which he received were notwithstanding of a most severe character, including rupture of the diaphragm and rupture with displacement upwards of the stomach.

Irish University Education.

Irish University education will probably soon again be thrown into the political melting pot, but in what form it will emerge it is difficult to say. The present state of affairs is not satisfactory to anyone, and quite recently the whole question has been reopened

by a series of resolutions passed by the Catholic archbishops and bishops. After stating their grievances they say their claims would be satisfied substantially: (*a*) by the establishment and endowment in an exclusively Catholic or in a common university of one or more colleges conducted on purely Catholic principles, and at the same time fully participating in all the privileges and emoluments enjoyed by other colleges of whatsoever denomination or character; (*b*) by admitting the students of such Catholic colleges, equally with the students of non-Catholic colleges, to university honours, prizes, and other advantages; and (*c*) by securing to Catholics, in the senate or other supreme university council of a common university, should such be established, an adequate number of representatives enjoying the confidence of the Catholic body. The question of how fairly to settle the claims of all parties in Irish university education is a very difficult and thorny one. Three courses suggest themselves:—1. A great central Irish university might be established embracing Trinity College, the Queen's Colleges, and the present Catholic University College, Dublin. To this plan, obviously, Trinity College would be strongly opposed, and it must be remembered it was over such a scheme that Mr. Gladstone was shipwrecked in 1873. 2. Another plan would be to found and endow a Catholic university, probably combining with it the Queen's Colleges of Cork and Galway, and to unite Trinity College and Queen's College, Belfast, in one Protestant university. In this way there would be two universities in Ireland. The Royal University would then, of course, cease to exist under such an arrangement, and its buildings would form the Catholic university. I am afraid, however, that Queen's College, Belfast, would never consent to such an arrangement, and probably Trinity College would not like the plan either. The old graduates of the late Queen's University of Ireland, many of them former students of Queen's College, Belfast, can never forget that it was to save Trinity College that their university was destroyed, and there is a tradition that the plan for its destruction was hatched within the walls of Trinity College, Dublin. Hence, with such a feeling still prevailing, the union of Trinity and Belfast Queen's Colleges in one common university would hardly be possible. 3. The third and, in the opinion of many, the most workable solution of the education question in Ireland would be to let Trinity College remain as it is, to establish and endow a Catholic university, and also to create a university of Belfast fully equipped and endowed with medical, Arts, theological, and engineering faculties. To such an arrangement there are two obvious objections, first, Can such a small country as Ireland support three universities? In reply, one has only to look to Scotland, where there are four universities, and to Wales, where, notwithstanding the number in England, the inhabitants are calling out for another university. The second objection is that such a plan would be merely denominationalism; but, under existing circumstances, however we may regret it, such a course is certainly gaining ground. If this third solution of the Irish education difficulty were carried out, of course the Royal University would cease to exist, and its present buildings could be handed over to the Catholics for their university. The University of Belfast would assist if Queen's College—which is in such a flourishing condition—and the Presbyterian colleges of Belfast, and Magee College, Derry, would form the theological faculty. The Presbyterian Church, to which the great majority of the Ulster students belong, could be granted under this scheme the right of appointing theological professors. I have ventured to sketch some plans for the solution of this vexed question of Irish university education. To all of them, undoubtedly, there are objections, but one thing is certain—the present arrangement, which is satisfactory to no one, cannot well continue much longer, and an attempt will probably be soon again made to settle the problem of Irish university education.

Extension of the Boundaries of Belfast.

At a special meeting of the city corporation held on Oct. 21st it was decided that a Bill should be presented to extend the boundary of Belfast so as to include the Parliamentary area. In future there are to be sixty members of the corporation and fifteen wards. Owing to the very rapid extension of the city in all directions there is, in many cases, no supervision either of the building or sewerage arrangements or any regulation of the frontage lines. In such places as Ligoniel and the district of the Connswater the bad drainage arrangements are constantly being discussed, but when these parts are taken within the corporate area there will be one sanitary authority, and so matters will more easily be adjusted.

Oct. 22nd.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Institut Pasteur: M. Pasteur's Successor.

THE administrative council of the Pasteur Institute met on the 16th inst. for the purpose of electing a successor to the directorate vacant by the death of M. Pasteur. The council is composed as follows: MM. Joseph Bertrand of the Académie Française, Jules Simon, Wallon, Duclaux, Maguin, and Christophe, Drs. Brouardel, Grancher, and Roux, Baron Alphonse de Rothschild, and the Vicomte Delaborde. M. Duclaux was unanimously promoted from the sub-directorship to the directorship, Dr. Roux being at the same time appointed sub-director in the place of M. Duclaux. An addition was made to the council in the person of M. Vallery-Radot, M. Pasteur's son-in-law; and M. Jean-Baptiste Pasteur, the late illustrious director's only son, was elected a member of the Assemblée (composed of thirty members, and under whose approbation the affairs of the Institute are managed by the council). The Institut Pasteur is the property of a company, but, having been recognised by the Government *d'utilité publique*, it is under the control of the State (Home Office). The Assemblée is made up of founders; by it the council is elected, the accounts passed, &c. The revenue is derived from the following sources: (*a*) the interest of 1,200,000 fr., balance of the sum of nearly 3,000,000 fr. publicly subscribed, about two-thirds of which was absorbed by the acquisition of the land upon which the Institute stands and by the building of the said Institute; (*b*) a subvention of between 20,000 fr. and 30,000 fr. made by the Agricultural Department for services rendered ("vaccinations" of animals against charbon, glanders, &c.); (*c*) a subvention (sum not mentioned) of the Ministry of Public Instruction to provide for the salaries of such officials as belonged formerly to the École des Hautes Études; (*d*) profits derived from the sale of vaccines supplied at a low rate to veterinary surgeons, these profits having been ceded to the Institute by M. Pasteur and by MM. Roux and Chamberland (the revenue from this source reaches about 20,000 fr. per annum; and (*e*) fees paid by the bacteriological students of the Institute. The anti-diphtheric department, directed by Dr. Roux under the dual control of the council of the Institute and the Ministry of the Interior, is an *annexe* of the Institute, but has a distinct budget. The headquarters of this department are at Garches (where Pasteur died) on a property ceded to Pasteur by the State. The serum is distributed gratis, according to the demands of the Ministry of the Interior, to the army, and to the hospitals and *bureaux de bienfaisance* of France and her colonies. The expenses are met by the interest of the public subscription (collected by the *Figaro*) and by a sum voted annually by Parliament (this year it amounted to 80,000 fr.). The serum is supplied to the public under the provisions of the Pharmacy Law, a small bottle being procurable at every druggist's for 3 fr. Any profit accruing from the sale will be devoted to the improvement of the particular *service*. The work done at the Institute comprises inoculations and lectures delivered by Drs. Roux and Metchnikoff, whose pupils are divided into two categories—those who are simply listeners and those who come to acquire the technique of bacteriology. There are, moreover, laboratories provided for investigators engaged in original research, the results of whose work are chronicled in the "Annales de l'Institut Pasteur." The teaching *personnel* is as follows:—Biological chemistry, M. Duclaux, who is besides Professor at the Faculty of Sciences, but who now gives his lectures at the Institute instead of at the Sorbonne, as was the case formerly. Rabies: Professor Grancher, with the collaboration of Drs. Charrin and Chantemesse. Sanitary bacteriology, "vaccinations," and practical applications: M. Chamberland. Morphological bacteriology: Dr. Metchnikof. Technical bacteriology: Dr. Roux. Finally, Professor Nocard of the Alfort Veterinary College superintends a veterinary *service* attached to the Institute. The Institute, opened in 1888, will continue its activity under the same constitution as under its late chief.

Some Curious Clinical Analogies.

In a recent lecture on Exophthalmic Goitre Professor Potain drew attention to the curious similarity existing between the symptomatology of that disease and a fit of passion. Look at a man under the influence of intense anger and you have an exact reproduction of the aspect of a sufferer from Basedow's disease—facial immobility, prominence of the eyeballs, fixity of gaze, trembling especially of the hands, palpitation of the heart, abundant sweating, sometimes diarrhœa and psychical disturbance reaching at times unconsciousness. What renders the analogy more marked is the fact that the onset of exophthalmic goitre has synchronised with a fit of passion. Professor Potain then remarked on the resemblance in many respects of Basedow's disease with Parkinson's (paralysis agitans). This neurosis he takes to be closely analogous to another physiological condition—terror. Thus in 1848, after the Revolution, there came under notice a large number of cases of paralysis agitans. Professor Potain graphically describes exophthalmic goitre as "congealed rage," and paralysis agitans as "congealed terror" (*colère figée* and *frayeur figée*).

Oct. 22nd.

ROME.

(FROM OUR OWN CORRESPONDENT.)

Winter Weather.

"'WINTER cities,' with a vengeance," was no doubt the remark of many an "arrival" who, having expected to bask in the warmth of a genial October, looked out yesterday on the snow-besprinkled Apennines. From the Agro Romano the heights beyond Rocca Priora and the flanks of Monte Gennaro appear arrayed in white, though Soracte remains bald and bleak as if determined to prove that only in the writings of Horace is it ever touched by snow. Curiously enough, it is the extreme spurs of the Southern Apennines that are most heavily visited by the premature winter; indeed, at Agnone in Sicily the thermometer had yesterday sunk to zero Cent. The bitter *tramontana* (north wind) meanwhile is sweeping over plain and city, enfilading the streets with "chilled shot" and forcing the thinly clad pedestrian within doors, whence he comes out, if at all, cloaked and muffled as if the ground on which he treads were a landslip from Siberia. Other cities than ours are even more fiercely assailed by the northern invader, and Florence, I hear, looks out on the uplands behind Vallombrosa and above Pistoia—nay, on Monte Morello itself—fleecy with winter. "Our Lady of Flowers" in ermine, as she appeared in February last, is doubtless a lovely and imposing object; but that she should affect that pose ere the autumn is well over is too much for her most thorough (I cannot say "warm") admirers. Italians, as a rule, are ill-prepared for such unseasonable visitations, and the sick-list and even death-rate from chest affections are apt to be abnormally large in consequence. The British tourist, *a fortiori* the British invalid, who contemplates a sojourn more or less prolonged in one or other of our winter cities, would do well, therefore, to bring plenty of warm clothing, as the arrangements for heating hotel or *pension* are not always satisfactory, and the stone floors, thinly carpeted or merely strewn with rugs, are fraught with danger to susceptible new-comers, particularly to young females. Catamenial disturbance, often of a very intractable kind, has thus been occasioned, while catarrhal affections, from the simple cold in the head (what Italians call *costipazione di testa*) to the gravest lesions of the mucous tract, respiratory or alimentary, are induced or aggravated by the same absence of comfort in draughty rooms or passages.

Congresses and Congressers.

To the information already given as to the Congress of Internal Medicine, which sits here from the 22nd to the 25th inst., I may add that the representation of the profession will be weightier, as well as more numerous, than on any similar occasion. Feletti of Catania, Massalongo of Padua, Sclavo of Turin, Giuffré of Palermo, Patella of Perugia, Rovighi of Bologna, Salomone-Marino of Messina, Masini of Genoa, Sgobbo of Naples, and Banti of Florence, all professors at these respective seats of learning, are a few out of many other delegates of the same standing, while as to the physicians in consultant or general practice their name is legion. The novel feature in the present congress is, as already stated, the delivery of clinical lectures in hospital (in this case the Santo Spirito) by past masters in their special subjects. Dr. Cardarelli, Professor of Clinical Medicine in Naples University, will discourse, with illustrative references, on Primary Sarcoma of the Pleura; Dr. De Giovanni of Padua on a Form of Congenital Hepatic Lesion; Dr. Grocco of Florence on the Psychical Stigmata of Hysteria (an interesting study of such cases as that of Louise Lateau); and Dr. Riva of Parma on the Cure of Empyema. The tendency to define and limit the subject-matter of these professional congresses explains this wholesome innovation on the old, promiscuous, and decidedly over-charged programme; while the announcement of the themes beforehand enables the Congressisti to reconsider or re-examine them in anticipation, and thus to profit the more from their treatment by experts. At Venice another important congress has been held on a subject of prime importance in Italy—Hydrology and Climatology. Her rich supply of mineral waters, and the variety, salubrity, and amenity of her climates are just beginning to be appreciated by her physicians and made practically available for the invalid. Gratifying progress in this latter direction was put *en évidence* at the congress, and, as to Venice in particular, the new drinking-water with which she has been provided, the baths, and the opening up of the Canal of Saint Mark being adduced as showing the advances made in sanitary resources by the Queen of the Adriatic. Another improvement of the kind was the restoration of the port of the Lido. This is the main entrance to the city from the Adriatic, but it was allowed to become so shallow by the silting up of its bottom that the water could not admit vessels of any considerable "displacement," while the currents were so few and so sluggish as to make the islands to the north quite malarious in hot weather. The cleansing and deepening operations effected by the "Genio Civile di Venezia" have changed all that; the largest ships can now enter the lagoons with safety, and the islands are as healthy and habitable in summer as in winter. All this is very reassuring to the travelling public and may be classed with the Disinfection of Baths, the guaranteeing of Purity in the Mineral Waters of Commerce, and such like matters discussed at the congress as proofs of Italy's hygienic, no less than political, "risorgimento." A curious topic, by the way, cropped up at this congress, Free Trade in Waters impregnated with Iodine Salts. Salt, or chloride of sodium, it is well known, is a Government monopoly in Italy. Now in such mountainous tracts as the Apennine range between Forlì and Florence there are many salt springs containing iodine. These are under close surveillance for the salt they hold in solution; but, notwithstanding this, the peasantry contrive to get the water in considerable quantities and extract the salt for their own use. Their *modus operandi*, however, does not eliminate the iodine, and by their use of salt so iodised they often injure their health, insanity being in some cases induced. The subject is important enough to attract the attention of the Public Health Department, and its ventilation at the congress will doubtless contribute to remedial legislation in the matter. In our university yet another congress opened to-day, that of Dermatology and Syphilography. Its president is Professor Tommaso De Amicis of the Neapolitan school, and a number of interesting papers were read and discussed in the forenoon and afternoon sittings. Of these I may note, for such of your readers as are making special studies in the same direction, Professor De Luca's monograph on Some Attempts at Sero-therapy in Lepra; Dr. Ciarrocchi's on the Absolute Necessity of Depilation in the Cure of Favus; Dr. Breda's on the Frambœsia of Brazil; Dr. Ciarrocchi's on Exudative Pleurisy during the Roseolar Stage of Syphilis; and Dr. Pini's note on Acute Psoriasis. Other papers are announced for tomorrow, and these, as reproduced in the officially revised "Atti" of the congress, will doubtless, like their predecessors, afford proof of the advances made by Italy in this very important branch of the healing art. I might wind up the list of medical or quasi-medical congresses held this month throughout the kingdom by a note on the Congress of Midwives (*Levatrici*) just concluded at Florence. But the interest attaching to this, though very real of its kind and sufficient to attract a large assemblage of *sages-femmes*, was rather social than scientific in its tenour, and even in the social aspect was of too local a character to merit more than this passing reference.

Oct. 19th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

The General Hospital.

THE proposal to transfer the General Hospital to the site of the Lunatic Asylum has now been set aside through unforeseen circumstances. The authorities were disposed to sell the site of the Lunatic Asylum to the State and to acquire the so-called Kobenzl (a hill in the environs of Vienna) for the purpose of building a new establishment there, as in this locality, which is remote from the bustle of the city, the asylum would have agreeable surroundings and, on the other hand, the General Hospital would have been a gainer by the change of situation. But pecuniary difficulties seem to have arisen when the matter came before the Finance Board, for although the prescribed time (Sept. 30th) has already passed, the Board has not yet made any sign of coming to a decision. As this project is now at an end the only alternative is the acquisition of the barracks next to the hospital; but in this case the clinics of the present hospital would have to be built elsewhere for the additional area would not be sufficient.

The Treatment of Diphtheria.

According to statistical returns published by the secretary of the Anna Hospital for Children the cases of diphtheria during 1894 numbered 914, with 425 deaths, being a mortality of 46·24 per cent. Among 760 cases treated by the old methods there occurred 385 deaths, yielding a mortality of 50·65 per cent., but since the introduction of serotherapy in October, 1894, there have been 40 deaths among 159 children affected with diphtheria, or a mortality of 25·15 per cent. Stenosis of the larynx in croup and diphtheria was treated by O'Dwyer's intubation and tracheotomy, either separately or in combination. In the cases where the stenosis was very urgent only tracheotomy was performed. Of 108 cases treated only by intubation 89 recovered and 19 died, being a mortality of 17·6 per cent. Both intubation and subsequent tracheotomy were performed in 121 cases, among which 28 recovered and 93 died, being a mortality of 76·8 per cent. In 166 cases tracheotomy only was performed, and among these there were 161 deaths, being a mortality of 97 per cent. The total number of cases with diphtheritic stenosis of the larynx which were operated on amounted to 395, with 122 recoveries, being a proportion of 30·8 per cent.

Professor Albert on Medical Study by Women.

The pamphlet on the Medical Education of Women published by this far-famed surgeon and teacher has not failed to cause a general sensation. The writer seeks to prove on physiological grounds that women are not well fitted to practise medicine; but his arguments ultimately lead to the conclusion that women are unsuited for any scientific occupation or pursuit, and should devote themselves to domestic duties and the exercise of the maternal functions. Under altered conditions of education women may succeed in approaching the comparatively high intellectual level of men; but they will nevertheless not be logical, for the impulsive faculty predominates in them, whereas the reflective and methodical habit of mind is peculiar to men. After this unflattering decision the writer discusses the question of the admission of women to medical study, and appeals to a pamphlet by the late Karl Vogt of Geneva, in whose opinion the small success of women as medical practitioners is due to their insufficent preparatory studies. Women, he concludes, are not competent to undertake the difficult tasks of medical practice, but they may do useful service in midwifery and operations. For this purpose they should be instructed in the elements of physics, chemistry, anatomy, physiology, surgery, and midwifery.

The Health of the Army.

According to the official report the number of recruits in 1893 amounted to 764,222, of whom 74·9 per cent. were rejected, as against 77·6 in 1892 and 75·3 in 1891; 2·3 per cent. were disqualified because of insufficient stature, and 51·7 per cent. because of weakly development of body, while 20·9 per cent. were declared absolutely unfit for service. The stature of 153 cm. (= 5 ft. 1 in.) was reached by 3·6 per cent. The details of the rejections for disease and deformity are the following: 0·49 per cent. for scrofula, 1·98 per cent. for diseases of the eye, 2·66 per cent. for varix, 2·39 per cent. for goitre, 2·21 per cent. for hernia, 0·81 per cent. for varicocele, 1·69 per cent. for knock-knee, 1·4 per cent. for flat-foot, and 2·18 per cent. for deformities of the thorax, the spinal column, and the skull. Insufficiency of stature existed in the following proportions among the men of the several nationalities: 1·6 per cent. for the Croats, 2·6 per cent. for the Hungarians, 2·8 per cent. for the Germans, 3·5 per cent. for the Bohemians, 4·3 per cent. for the Roumanians, 6·7 per cent. for the Poles, whereas the cases in which the requisite standard was attained respectively amounted to 27·4, 26·7, 24·2, 23·8, 34·8, and 22·2 per cent. During 1893 the rate of invaliding was 8·79 per cent. of the soldiers against 9·11 in 1892 and 8·91 in 1891. Scorbutus formed 0·23 per cent. of all the registered diseases, arthritis 0·81 per cent., scrofula 0·13 per cent., phthisis 0·32 per cent., trachoma 0·77 per cent., pneumonia 0·85 per cent., pleurisy 0·44 per cent., angina 4·59 per cent., syphilis 6·54 per cent., and diseases of the skin 21·58 per cent.: the report also mentions 41 cases of cholera. The number of deaths amounted to 1172, being a mortality of 0·39 per cent. of the army, against 0·45 per cent. in 1892 and 0·4 in 1891, the highest monthly rate being registered in April and the lowest in August. Suicides numbered 321, being equal to 0·1 per cent., and there have also been 109 cases of attempted suicide and 76 of self-mutilation. The report confirms the well-known fact of the increasing degeneration of the Galician population and the prevalence of venereal disease, attributable to service in Bosnia, where syphilis is raging.

Unhealthy Houses in Vienna.

Those who expected that the new Building Act would become law in 1894 have been disappointed, and meanwhile houses have been erected in contravention of the rule that 15 per cent. of the site should remain uncovered by buildings. The housing of the masses, therefore, remains as unsatisfactory as ever, and will not be improved as long as the poor are at the mercy of speculators eager for exorbitant profits. Under these circumstances it is not surprising that many persons have to rent cellar dwellings and other places unfit for habitation. Another abuse which frequently occurs under the present system is the premature occupation of newly built houses. It is well known that brickwork requires a year for effectual drying and for the passage of air through the interstices to become established, but nevertheless, and in spite of legal prohibition, tenants enter into possession almost before the scaffolding is removed. Chronic ill-health among children, scrofula, infectious diseases, early death, and the initiation of youth into vice are some of the evils resulting from overcrowding and unwholesome dwellings.

Cholera in Galicia.

During last week 19 cases of cholera and 18 deaths have been reported from the districts of Tarnopol, Kamionka, and Trombosola, making a total of 113 cases with 77 deaths since the commencement of the outbreak.

Oct. 21st.

RUSSIA.

(FROM OUR OWN CORRESPONDENT.)

New Regulations for the Russian M.D. Degree.

CONSIDERABLE changes are about to be made in the Russian degree of Doctor of Medicine, both in the methods by which it is obtained and (so far as Government authority can alter the status of a degree) in the general standing of the M.D. degree. The proposed alterations were suggested some years ago by the Ministry of Education, and in the meantime were submitted to the criticism of the medical faculties of all the Russian Universities and the Imperial Army Medical Academy. Finally the scheme came, as all such schemes must, before the Medical Council, the final authority in all medical matters. The Council has decided to make the following changes. The degree of M.D. will no longer be an *utcheno-practitcheski* degree as hitherto—that is to say, it will cease to be classified among others as a "scientific-practical" degree, but will be purely *utchenui*—that is, "scientific" or "learned." Consequently, Doctors of Medicine will cease to be classed as belonging to an *utcheno-sluzhebnui* calling. To make this quite clear would necessitate a complete account of the system of *tchins*, castes or ranks, which obtains in Russia, and by which the whole nation is divided and subdivided into groups and each person labeled according to his calling and rank in it. Briefly the result of the new change appears to be that, as the above-mentioned term signifies rather the official rank (length of

service &c.) of the individual than the extent of his scientific attainments, holders of the M.D. degree will be outside such official designation altogether. The conditions under which the degree will in future be granted are these: The candidate must have obtained the Russian diploma of "Vratch" (or medical practitioner) at least three years before the examination for the M.D. is concluded. This examination, which covers many subjects, must not extend over two *semestres*. The candidate who passes this must within the next five years present and defend a thesis on some professional subject; if he does not do so, but should still desire to obtain the degree after a longer period than five years, he has to undergo a fresh examination. The examination includes such general subjects as anatomy (macroscopic and microscopic), physiology, pathological anatomy and histology, the history of medicine, and general hygiene; but it is more particularly directed to the special branch of the medical sciences which the candidate may choose. Specialism is, indeed, the keynote of the new regulations. There are seventeen subjects or branches of specialism named; these are anatomy, histology, physiology, physiological chemistry, pathological anatomy and histology, general pathology, pharmacology, pharmacy and pharmacognosey, internal diseases, nervous and mental diseases, venereal and skin diseases, surgery, ophthalmology, midwifery and gynæcology, disease in children, hygiene, and finally legal medicine. There is little doubt that under the new regulations the degree of M.D. will be considerably harder to obtain than it is now; and it is now by no means easy. What seems likely to be questioned is the wisdom of making it practically inaccessible to any but specialists. On the other hand, specialism meets with high approval and success in this country and is carried to an extent undreamt of in England.

Cholera in Russia.

The following table completes the statistics of cholera in Russia up to the present; it is a continuation of the table in my last letter:[1]—

	Cases.	Deaths.
IN VOLHYNIA.		
Between Aug. 19th and Aug. 26th	4273	1668
,, Aug. 27th ,, Sept. 2nd	3554	1417
,, Sept. 3rd ,, Sept. 9th	2330	903
,, Sept. 10th ,, Sept. 16th	1919	798
IN KIEF.		
Between Sept. 3rd and Sept. 9th...	16	3
,, Sept. 10th ,, Sept. 16th...	41	18
IN PODOLIA.		
Between Aug. 20th and Aug. 26th	35	11
,, Aug. 27th ,, Sept. 2nd	16	8
,, Sept. 3rd ,, Sept. 9th	23	15
,, Sept. 10th ,, Sept. 16th	9	3
,, Sept. 17th ,, Sept. 23rd	0	0
IN PRIMORSKAIA OR MARITIME PROVINCE.		
Between July 1st and Aug. 29th...	74	54
,, Aug. 30th ,, Sept. 5th	8	4
,, Sept. 6th ,, Sept. 12th	8	11
,, Sept. 13th ,, Sept. 18.h	2	1

It will be seen that the epidemic is diminishing everywhere except in the government of Kief, where it is, or was, increasing. It is present in only one *uyezd* of the government—that of Berditchef. In Podolia, it will be observed, the epidemic is extinct.

The late Tsar and M. Pasteur.

In connexion with the death of Pasteur it may be of interest to recall the fact that one of the most munificent of the original donors to the Institut Pasteur was the late Tsar, Alexander III., whose donation was no less than 100,000 fr. Many Russian learned societies and some lay corporations sent representatives to the recent funeral ceremony in the Rue Dulot.

Causes of Death in the Medical Profession.

The last monthly report of the Medical Department contains a supplement of some interest. This is a tabular statement of the cause of death of 1400 medical men who have died in Russia during the last six years. The most striking figure in the table is the 457 deaths from infectious diseases—that is to say, that nearly one-third of the total number of deaths were due to disease contracted (presumably) in the course of professional duty. These 457 deaths include 95 from typhus fever, 193 from pulmonary consumption, 28 from typhoid fever, 10 from diphtheria, and 3 from small-pox. From diseases of the respiratory organs there were 52 deaths, of the circulatory organs 122, of the alimentary system 39, of the excretory system 35, of the nervous system 120, and, finally, from suicide 50.

St. Petersburg, Oct. 7th (19th).

[1] THE LANCET, Oct. 5th, 1895. The dates in the table are all according to the Old Style.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Cholera at Damietta.

TWELVE years ago, on June 22nd, 1883, cholera was discovered at Damietta, a seaport town of about 40,000 inhabitants of the strictly conservative order of Mussulmans. Now, after many summers during which cholera has been fruitlessly searched for by clinical and bacteriological experts, the fiend has suddenly reappeared. So far it is unknown whence or why, and it has not yet been possible to trace any connexion between it and the return of the pilgrims from Mecca, where there undoubtedly was cholera in the summer months. But it is satisfactory to state at once that its discovery has not, as in 1883, been preceded by a long period of premonitory diarrhœa. There is a history of seven outbreaks of cholera in Egypt since 1831, and every one of those occurred during the summer, usually beginning in June and ending in October—i.e., appearing when the Nile is low and the drinking-water foul, and vanishing gradually when the Nile flood has been some little time at its height and has had time to carry all impurities from canals and wells by its majestic flow towards the sea. To find a parallel to the present year I must go back to 1837, when there was a short mild outbreak of cholera in September, but this, according to Hirsch and other observers, was part of a continuous progress through Tripoli and Tunis to Abyssinia and Zanzibar. The 1837 disease has left no official traces behind it in Egypt, and I can only hope that the present scare will be as little harmful to the welfare of this country. On Oct. 12th news reached the Sanitary Department in Cairo, from their inspector at Damietta, that he had heard of two cases of suspicious diarrhœa and vomiting, and that in one the patient was already dead. Instructions were at once telegraphed to him to perform a necropsy and preserve the intestines for Dr. Kauffman, who was immediately sent to Damietta with Dr. Pinching. Dr. Kauffman reported next day that he had found no bacilli in the fresh fæces, but that they existed in small numbers in peptone cultures. He sent at the same time a special messenger with some of the suspected material to Dr. Bittar, a disciple of Professor Koch, who shares with Dr. Kauffman the highest bacteriological reputation in Egypt. Dr. Bittar, working in his laboratory in Alexandria, telegraphed independently that he also failed to find any comma bacilli until after a peptone culture. Dr. Kauffman, who studied cholera clinically at Hamburg, also stated that the cases in the hospital wards and in the post-mortem room were not unlike mild cholera. The English authorities determined from the outset to act energetically and openly. The Quarantine Board and the press were informed, Dr. Rogers Pasha was recalled from leave in Europe, and all possible sanitary measures were put in force at and near Damietta. On Oct. 13th there was a second death, and on the 14th two others, all confirming the diagnosis only too certainly. On Oct. 15th at 2 A.M. characteristic colonies on gelatine were seen of the first two cases, and to-day I, with Dr. Armand Ruffer, have seen bacilli from the sixth death, which occurred yesterday. A rice-water stool was taken direct from the ileum soon after death and furnished bacilli on peptone, but in very small quantities. It is by no means conceded in Egypt that the comma bacillus is the cause of cholera, but it is, of course, recognised that it is a constant companion, if not more. Altogether there have now been seventeen cases, including eight deaths, all living in one of the worst quarters of Damietta and taking water from an unclean canal in the neighbourhood. Now that the existence of the disease is proved the water-supply is of the greatest importance. I am able to state upon the highest authority in Egypt that Damietta is now having its best possible water-supply, though its poorer inhabitants may have to be prevented by force from making use of that which is bad. The Nile flood reached Damietta this year at the end of July about ten days earlier than usual, and even before that there was a very fair supply of water all through the

summer, for the Nile was at an exceptionally high level. When the Nile is low the water becomes salt because it is then below the sea level, and the inhabitants have to depend upon a large cistern which has lately been made water-tight and is regularly cleaned out. This is sufficiently large to supply the town for two months. Moreover, since 1890 a new circular canal has been dug, bringing Nile water from near Cairo, and this is now at its height. About the same date the *cloaca maxima* of the town was filled in and converted into a road. During the latter half of September there was a mysterious illness in the village of Ekhwa, and also in the eastern Delta, but many miles from Damietta; twelve sick people were treated and as many as nine died. The sick and the necropsies were seen by Dr. Kauffman, who failed to find any evidence of cholera, bacteriologically or otherwise. They were also seen by Dr. Hamdy Bey, who, as sanitary inspector of Cairo in 1883, had a large experience of cholera. Both declared officially that the disease was not cholera, and they believed that it was due to some ptomaine poisoning. The inhabitants of this village lived chiefly at this time upon dates, which they were gathering all day, and upon "fisikh," a stinking fish of which the natives are very fond. Since the reports from Damietta I have interviewed both these medical men, and they are still quite firm in their belief that the September illness was not cholera.

Cairo, Oct. 16th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Election of the Staff of the Melbourne Hospital.

ON Aug. 15th last the whole of the honorary medical staff of the Melbourne Hospital, eighteen in all, were elected by the subscribers to the institution for a period of four years. The polling was conducted in a large hall in Collins-street, the pavement in front of which, and for a considerable distance beyond, was blocked all day by an eager crowd, and the public excitement was even greater than that seen at a political contest. The partisans and touts of several of the candidates wore colours and distinguishing badges, and were most persistent in pushing the claims of their respective candidates. The proceedings, as a whole, were anything but calculated to raise the profession in the eyes of the public, and in individual instances were most offensive, and even ludicrous, as, for instance, when a small donkey-cart, holding a diminutive boy, was driven up and down the street placarded with large posters asking for votes for two of the candidates, both of whom, however, repudiate the device. A remarkable feature was the number of ladies who were present working for different candidates, while a most discreditable one was the fact that between twenty and thirty cases of impersonation of voters occurred. For months past (as explained in a previous communication) candidates and their friends have been conducting a most vigorous canvass, personally and otherwise, and it is an open secret that money was spent freely in manufacturing votes. It was supposed that a by-law passed a few months ago would have prevented this; but some means of evading it must have been discovered, as the president of the hospital stated, in a letter to the press, that 130 people in Adelaide voted by proxy and for one candidate. It must not be supposed that all the candidates resorted to these undignified and discreditable electioneering dodges, and it is gratifying to know that those members of the old staff who refrained from making a personal canvass and conducted their electioneering in a quiet and honourable manner were not only re-elected, but in most instances occupied good positions at the poll. The results were as follows, all the members of the old staff seeking re-election to their former positions being returned, their names being indicated in each case by an asterisk:—

PHYSICIANS.

To IN-PATIENTS (4).

	Votes.		Votes.
*Dr. J. Williams ...	2674	*Dr. P. Moloney ...	1962
*Mr. J. W. Springthorpe ...	2481	Dr. D. Grant ...	1761
*Dr. J. R. MacInerney ...	2331	Dr. H. E. Astles ...	1427

To OUT-PATIENTS (5).

	Votes.		Votes.
*Dr. J. E. Nihill ...	2658	Dr. W. Andrews ...	1713
*Dr. W. R. Boyd ...	2383	Dr. G. Annand ...	1201
*Dr. W. C. Daish ...	1984	Dr. E. J. Keogh ...	1194
*Dr. G. T. Howard ...	1863	Dr. C. Bage ...	1166
Dr. H. F. Lawrence ...	1726		

SURGEONS.

To IN-PATIENTS (4).

	Votes.		Votes.
*Mr. R. A. Stirling ...	2632	*Mr. C. S. Ryan ...	2249
*Mr. T. N. Fitzgerald ...	2310	Mr. H. M. O'Hara ...	1418
*Mr. F. D. Bird ...	2278	Dr. W. Gardner ...	1034

To OUT-PATIENTS (5).

	Votes.		Votes.
*Mr. A. W. F. Noyes ...	2364	Mr. W. K. Hughes ...	1524
*Mr. G. A. Syme ...	2247	Mr. James Amess ...	1119
*Mr. G. C. Rennie ...	2177	Mr. R. H. Russell ...	906
*Dr. W. Moore ...	2143	Mr. H. P. Godfrey ...	743
*Mr. F. H. Langlands ...	2093	Mr. J. A. Robertson ...	591

As has happened after previous elections, proposals are now being made for altering the method of election. A Bill was introduced into the Legislative Council to appoint an electoral college for all the hospitals in the colony, but the Bill was not even voted on, so evident was the opposition to it. The Medical Society of Victoria at its last meeting decided to hold a conference with the other medical societies for the object of devising some better method of election. In the past, however, the difficulty has not been in devising schemes, but in getting them carried into effect.

Fatal Case of Abortion by a Quack.

Reference has already been made to the success and effrontery with which quackery is practised in Sydney. One of the fraternity, however, would appear recently to have gone a little too far, and in consequence is now lodged in gaol on a charge of murder. The first discovery in the case was rather sensational, a packing case being found in a principal street in Sydney containing the mutilated remains of a young woman. The inquiries of the police soon enabled them to get the body identified as that of a girl who had left her mother's home and went to Sydney with the object of getting abortion procured. It would appear that she went to the quack in question, who is alleged to have operated, with the result that she developed peritonitis and died. He then is said to have made a crude post-mortem examination and attempted to dispose of the remains in the manner described, which led to his speedy arrest.

Hydatid Cysts: their Treatment, Diagnosis, and Prevalence

Hydatid disease continues to occupy the attention of the profession in Australia. Mr. Charles Ryan of Melbourne has recently read two papers dealing with its surgical treatment. In the first paper two cases of multiple hydatids of the abdomen were described. In one case eighteen cysts were dealt with in four separate operations. At the first operation thirteen cysts in the omentum were removed, the portion of omentum containing them being ligatured and removed *en masse*; while another cyst growing from the pelvic peritoneum was evacuated, the cyst removed, and the adventitial sac sutured and dropped back into the abdominal cavity and the parietal wound closed (Bond's method). This cyst suppurated and had to be opened and drained, and another cyst pressing on the rectum was opened through the cyst first treated. Two other cysts on the other side of the abdomen were treated by Lindemann's operation and drained. The patient was desperately ill for a time, but recovered perfectly. In the second case fifty cysts in all were treated in six successive operations. Eighteen omental cysts were completely removed at the first operation. At the second seven further omental cysts were removed and two cysts in the liver treated by Lindemann's method. At the third operation two more hepatic cysts were treated in the same way. At the fourth operation five cysts in the mesentery were removed and three were incised and dropped back without suture of the adventitia. At the fifth operation a cyst on the upper surface of the liver was opened through the pleural cavity after excision of portion of a rib; the cyst was extracted and the wound closed without drainage or suture of the adventitia. Finally, at the sixth operation a splenic cyst was opened from the abdomen and treated in the same way. A good deal of constitutional disturbance followed the first four operations, but not the last two. In his second paper Mr. Ryan related four further cases of hepatic cyst treated by the intra-peritoneal method, without suture of the adventitia, and with immediate closure of the abdominal incision. All did well, and in three recovery was much more rapid than after Lindemann's operation. In one case some constitutional disturbance occurred, and eight days afterwards bile was evacuated through the wound and continued to discharge for three weeks. As the result of his experience Mr. Ryan is a strong advocate of the method of treatment adopted in these

cases, and says that "Lindemann's operation may now be relegated to the past for simple and uncomplicated cases, and be confined to suppurating and a few exceptional cases." He also points out the advantage of dealing with multiple hydatids in several successive operations when an attempt to remove too many at once would prove fatal. With this opinion surgeons who have had experience of these cases will agree, but the discussions on the two papers and on previous occasions show that there is far from unanimity as to the general applicability of the intra-peritoneal method, and difference of opinion exists as to its dangers and as to what happens when hepatic cysts are healed in this way. Some maintain that the edges of the incision in the adventitia become apposed to the abdominal incision, and that if serum or bile be effused into the adventitial sac the effused fluid will make its way out through the parietal incision and not into the peritoneal cavity. Others maintain that the fluid will escape into the peritoneal cavity, but will do no harm, being rapidly absorbed—i.e., if aseptic. Several cases have now been reported which show that bile does escape, and so far it has always, so far as is known, made its way out through the parietal incision and without doing serious harm. Since Mr. Ryan read his paper, however, he has himself operated by the intra-peritoneal method on a large cyst in the left lobe of the liver, with a fatal result from septic peritonitis. At the post-mortem examination the adventitial cyst was not near the incision in the abdominal wall, and was moderately distended with dirty grumous fluid similar to that which occupied the general peritoneal cavity. Dr. Fiaschi of Sydney contributes to the August number of the *Australasian Medical Gazette* a note on the value of "Santini's hydatid resounding sound" obtained by percussing a hydatid cyst while auscultating it. Dr. Fiaschi has verified the fact that the sound exists, and regards it as valuable, not only in helping to diagnose hydatid from other tumours, but in distinguishing single from multiple cysts. At the last meeting of the South Australian Branch of the British Medical Association Dr. E. C. Stirling of Adelaide read a paper on the Relative Prevalence of Hydatid Disease in the various Australasian Colonies, compiled from figures supplied to him by the different hospitals. It appears that hydatid disease is most prevalent in South Australia, where practically 1 out of every 100 patients admitted to hospital suffers from it. Victoria comes next with a percentage of 0·64, New South Wales has a percentage of 0·57, Tasmania 0·52, Western Australia 0·23, New Zealand 0·19, and Queensland 0·07. The average for all the colonies is 1 hydatid for every 206 in-patients. There is a special concentration of the disease in the south-eastern district of South Australia and the western district of Victoria. From a comparison of these figures with those compiled by the late Dr. Davies Thomas in 1884 it appears that there is a substantial increase in the prevalence of the disease, though the increased ratio is also probably to be accounted for to some extent by the disease being more frequently recognised.

Phthisis in Australia.

Dr. G. L. Mullins of Sydney has contributed to the August number of the *Australasian Medical Gazette* a paper bristling with statistics as to the prevalence and distribution of phthisis in the Australian colonies. He controverts the statement of Hirsch that "the reputation that Australia used to enjoy for the rarity of consumption and for the favourable influence of its climate upon the course of the malady has of late been shown to be a mistaken one." Comparing the death-rate from phthisis both per 100 deaths from all causes and per 1000 living inhabitants of Australia with other countries, Dr. Mullins shows that Australia has by far the lowest rate, and that the capital cities of that continent have a much lower rate than European cities. Further, it appears that phthisis is decreasing in prevalence in Australia. From the returns of Queensland—the only colony from which suitable returns can be procured—it appears that the Australian born population is not subject to phthisis. At the last meeting of the New South Wales Branch of the British Medical Association Dr. Sydney Jones advocated the establishment of a "farm hospital" for the treatment of cases of phthisis in its early stage. The buildings should be of an inexpensive kind, surrounded by a large area of land to be cultivated by the patients, and in this way it might be partially self-supporting. He objected to the mixing of early and advanced cases of phthisis in the same hospital.

Obituary.

THOMAS GROOM, F.R.C.S. ENG.

BY the death of Mr. Groom of Whitchurch, who passed quietly away on Oct. 7th, the county of Salop has lost its senior medical practitioner, a highly respected veteran, whose talents had for more than sixty years been devoted to the relief of suffering. He belonged to a very old Shropshire family, being the fourth son of the late Mr. John Groom, formerly of Hardwicke Grange, and he was born at Wolverley Hall in the same county. Hardwicke was the residence of Lord Hill, the famous general of the Peninsular War, who also fought at Waterloo, and was Commander-in-Chief to His Majesty George III., and it was there that he died. Mr. Groom commenced the study of medicine by becoming an apprentice to the late Dr. Gwynne of Wem. He subsequently studied at Guy's and St. Thomas's Hospitals, and after passing the usual examinations gained the diploma of the Society of Apothecaries in 1833, and became a Member of the Royal College of Surgeons of England in 1834. Having commenced practice at Whitchurch in 1834, he for many years enjoyed a large and lucrative practice in the town and neighbourhood, and in 1861 was admitted an Honorary Fellow of the Royal College of Surgeons of England, but of late years he retired from the more active duties of his profession. The deceased endeared himself to a large circle of friends, by whom he was much esteemed, and his cheerful disposition and genial hospitality will long be remembered. He would have been eighty-six years of age had he been spared a few weeks longer to see Nov. 21st, and was a widower, having been twice married, but has left no family. He was an ardent sportsman, and as showing the abundance of game in the neighbourhood of Whitchurch in the "good old days," as compared with the present time, it may be noted that one forenoon in September in the "forties," before the days of breechloaders, he killed with one barrel thirty brace of partridges. So greatly was the deceased respected that when his funeral took place, on Oct. 10th, along the entire route from his late residence to the parish church there was not a house where the blinds were not drawn down or the shutters closed. Many beautiful wreaths and mosses were deposited on the grave by relatives and personal friends.

FREDERICK BERNARD BETTS, M.R.C.S. ENG., L.R.C.P. LOND.

ALL those members of the profession who came in contact with Mr. F. B. Betts will be deeply grieved to hear of his untimely death at Antofagasta, Chili, on Sept. 4th. Mr. Betts entered the medical school of the Westminster Hospital in 1884, and worked with unremitting zeal until he became qualified to practise in 1889, distinguishing himself by taking no small number of prizes. He held in the hospital all the resident posts until failing health sent him for three voyages to South America as surgeon to the R.M.S. *Iberia*. On his return with recovered strength he acted as resident medical officer at Queen Charlotte's Lying-in Hospital, after which he left England for the last time on his acceptance of a post as surgeon to the Huanchaca Silver Mine and Railway Company at Antofagasta. Possessed, as he was, of an exceptionally cheerful disposition, he quickly won the hearts of those among whom he had elected to dwell, and his early death—Mr. Betts was but twenty-eight years of age—was received with universal dismay amongst European residents and Chilians alike. The *Chilian Times* of Sept. 11th paid a touching tribute to his memory in a long article, concluding: "Although but little more than two years resident in Antofagasta, the universal grief manifested at his death and at his grave testified how much he was respected and beloved. His memory will linger long in many a grateful heart."

JOHNSON MARTIN, L.F.P.S. GLASG., L.S.A. LOND.

THE many friends and acquaintances of Mr. Johnson Martin, of Great Lever, near Bolton, have been deeply moved by his death, which took place on Sept. 22nd at his residence, Carlisle-terrace, Moses Gate. He was the son of

Dr. Robert Martin, and was born at Tyldesley in 1821. Having resolved to follow his father's profession, which two of his brothers had already entered, he studied at the Pine-street School of Medicine, Manchester, increased his knowledge by apprenticeship to one of his brothers, and qualified as L.S.A. in 1851. After a further period of study at King's College he obtained the diploma of the Faculty of Physicians and Surgeons of Glasgow in 1857, and before many years was in the enjoyment of an extensive practice at Farnworth, near Bolton, from which place he removed to Moses Gate in 1881. Mr. Martin took an active part in local politics and public business for more than thirty years, contributed several articles to periodical medical literature, and in 1883 wrote a report on Over-pressure and Home Lessons to the Local Government Board. He has left a widow and family, one of his sons being in the medical profession. At the time of his death he was President of the Bolton Medical Society.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The death of the following eminent foreign medical man is announced:—Dr. L. T. Tumas, formerly Professor of Internal Medicine in Warsaw, from phthisis at Yalta in the Crimea. He had been a distinguished student in the St. Petersburg Medico-Chirurgical Academy, where he held office under the late Professor Botkin and was assistant physician in charge of Professor Manassein's wards. He had published papers on phthisis, on the vomiting centres, and other subjects.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the First Examination of the Board under the four years' regulations in the subjects indicated:—

Chemistry, including Chemical Physics:

Anderson, Lewis Pemberton, University College, Liverpool, and Owens College, Manchester.
Ashe, Arthur Ogilvie, King's College, London.
Duncan, James Simpson, Westminster Hospital.
Duncan, John Marie Sloane, London Hospital.
Edwards, William Howard, Guy's Hospital.
Read, Walton Rix, private study.
Wolverson, John Archibald, Mason College, Birmingham.

Materia Medica:

Ahrens, Henry Augustus, King's College, London.
Argles, Robert Lendon, St. Mary's Hospital.
Beverley, George William Bertram, University College, Bristol.
Butler, Thomas Langton, St. Mary's Hospital.
Cater, Joseph, King's College, London.
Chidley, Thomas James, Carmichael College and Royal College of Surgeons, Dublin.
Duncan, George Ernest, Guy's Hospital.
Edwards, William Howard, Guy's Hospital.
Ellis, Martin Francis, Yorkshire College, Leeds.
Fox, Campbell Tilbury, University College, London.
Haynes, George Secretan, St. Bartholomew's Hospital.
Henery, John Philip Edmund, St. George's Hospital.
Hopkins, Edward Lewis Nathaniel, Middlesex Hospital.
Lennane, Alfred James Andrew, University College, London.
May, Walter John, Charing-cross Hospital.
Meade, Frank Elliott, St. Bartholomew's Hospital.
Musselwhite, William, Guy's Hospital.
Nicholls, Ernest Albert, London Hospital.
Norrington, Henry Lawrence Weekes, University College, Bristol.
O'Fflahertie, Austin Romuald, London Hospital.
Silvester, William George, Mason College, Birmingham.
Wilcox, Richard Loy, University College, London.
Williams, William John Howard, St. Mary's Hospital.
Youell-Carter, Oliver Charles, Charing-cross Hospital.

Elementary Anatomy and Elementary Physiology:

Bennett, Percy Moore Septimus, Middlesex Hospital.
Beringer, Fritz John Alfred, London Hospital.
Dutton, William, Owens College, Manchester.
Holroyde, Alfred, Yorkshire College, Leeds.
Walmisley, Nicholas, St. Bartholomew's Hospital.
Whyte, Frederick William, Queen's College, Belfast, and Mr. Cooke's School of Anatomy and Physiology.

Elementary Anatomy only:

Agnew, Samuel Skelton, Queen's College, Cork and Belfast.

Elementary Physiology only:

Nelson, William Ernest, Cambridge University.

The following gentlemen passed the First Examination of the Board under the five years' regulations in the subjects indicated:—

Chemistry and Physics:

Alderson, Francis Bellairs, Firth College, Sheffield.
Bell, Robert John, Charing-cross Hospital.
Bennett, William Frederick Cockayne, Firth College, Sheffield.
Beverley, Kenneth Harold, University College, Bristol.
Brunton, Arthur Greene, Mason College, Birmingham.
Carter, George Archibald, Royal College of Surgeons, Edinburgh.
Causton, Albert Edward, Guy's Hospital.
Clarke, Arthur Allen Faster, St. Thomas's Hospital.
Cox, George Ralph, School of Science, Cheltenham.
David, Archibald Sinclair, London Hospital.
Davis, Alexander Montagu, Mason College, Birmingham.
Devitt, Herbert Pye-Smith, University of Cambridge.
Dunstan, Robert, London Hospital.
Francis, William Varè Chalmers, Westminster Hospital.
Fyffe, Robert James, Firth College, Sheffield.
Gauld, Reginald, London Hospital.
Goble, Edwin Wallace, Guy's Hospital.
Goodwin, William Richard Power, St. Mary's Hospital.
Green, Samuel Morris, University College, Liverpool.
Gribbell, William Ernest, St. Mary's Hospital.
Hagon, Albert, University College of South Wales, Cardiff.
Haig, Thomas Baker, St. Bartholomew's Hospital.
Hall, Robert William Basil, Guy's Hospital.
Harris, Thomas Arthur Ball, Firth College, Sheffield.
Harrison, Reginald Tempie, St. George's Hospital.
Hearn, Edward Michael William, London Hospital.
Hopkins, William George, St. Mary's Hospital.
Kerfoot, Stanley James, London Hospital.
Lamb, Ralph, University College, Liverpool.
Leggatt, Claude Edward Heisch, St. Mary's Hospital.
Lewis, Arthur Cedric, Guy's Hospital.
Loosely, William Henry, Guy's Hospital.
Mead, Edgar Preston, London Hospital.
Moses, David Assur Henry, St. Bartholomew's Hospital.
Narramore, Edward Giles, School of Science and Technology, Liverpool.
Passmore, William Henry, Charing-cross Hospital.
Porter, Charles Robertson, London Hospital.
Reilly, Percy George, London Hospital.
Rowland, Frank, Mason College, Birmingham.
Semmence, Ernest Edward, Royal College of Surgeons, Edinburgh.
Speirs, William Clark, St. Mary's Hospital.
Wells, Hardy Vesey, St. Mary's Hospital.
Woodyatt, Henry Constantine, Owens College, Manchester, and University College, London.
Young, Thomas, St. Bartholomew's Hospital.

Practical Pharmacy:

Asten, Walter, Mason College, Birmingham.
Beale, Hanway Richard, St. Thomas's Hospital.
Beale, Joseph Richard, St. Thomas's Hospital.
Brown, Thomas Warren, St. Bartholomew's Hospital.
Bradley, Richard Walter, St. Mary's Hospital.
Capper, Harold Selwyn, University College Hospital.
Cornish, Philip Alfred, Middlesex Hospital.
Crawley, Herbert Edward, Oxford University.
Cunningham, John Francis, St. Thomas's Hospital.
David, Archibald Sinclair, London Hospital.
Edington, Ernest Adolphus, University College, London.
Fyffe, Robert James, Firth College, Sheffield.
Hawker, Herbert, University College, London.
Hearn, Edmund Michael William, London Hospital.
Hoyle, John, Owens College, Manchester.
Jeaffreson, Dudley, St. Bartholomew's Hospital.
Ruttledge, William Edward, University College, London.
Scott, Claude Sigismund, St. Bartholomew's Hospital.
Smith, Thomas Shalden, St. Mary's Hospital.
Stephens, Henry Zouch, St. Thomas's Hospital.
Twort, Frederick William, St. Thomas's Hospital.
Vine, Alfred Bertram, Middlesex Hospital.
Wood, Charles Herbert, University College, London.

Elementary Biology:

Barnes, George, St. Mary's Hospital.
Brangwin, Charles Harold, Guy's Hospital.
Bryan, Clement Arthur Douglas, Guy's Hospital.
Carter, George Archibald, Royal College of Surgeons, Edinburgh.
Cope, Gilbert Edgar, Westminster Hospital.
Davies, Arthur Gerald Capel, Guy's Hospital.
Harrison, Sydney George, Charing-cross Hospital.
Hill, Leonard Vincent, Firth College, Sheffield.
M'Ennery, Ambrose Richard, University College, Bristol.
Morris, Herbert Edward, Guy's Hospital.
Narramore, Edward Giles, School of Science and Technology, Liverpool.
Newton, Reginald Goldie, Oxford University.
Roberts, Stuart Kenyon, St. Bartholomew's Hospital.
Robinson, James Frederick, Birkbeck Institute.
Semmence, Ernest Edward, Royal College of Surgeons, Edinburgh.
Sloane, Hans Hill, St. Bartholomew's Hospital.

Elementary Anatomy:

Baker, Dodington George R. Sherston, University College, London.
Brinton, Arthur Greene, Mason College, Birmingham.
Carter, George Archibald, Royal College of Surgeons, Edinburgh.
Cathcart, George Elliott, St. Bartholomew's Hospital.
Dowman, Charles Darby Allen, St. Bartholomew's Hospital.
Everington, Francis Edgar, St. Bartholomew's Hospital.
Foster, Arthur Herbert, St. Mary's Hospital.
Graves, David Sydney, Guy's Hospital.
Green, Samuel Morris, University College, London.
Griffiths, William Layard, University College, London.
Hicks, Charles Edward, Guy's Hospital.
Jones, David Morgan, St. Mungo's and Anderson's College, Glasgow.
Lister-Kaye, Alan, Guy's Hospital and Mr. Cooke's School of Anatomy and Physiology.
Murdock, Horace Thomas Thorns, Yorkshire College, Leeds.
Perks, John, St Bartholomew's Hospital.
Prichard, John Llewellyn, University College, Liverpool.
Semmence, Ernest Edward, Royal College of Surgeons, Edinburgh.
Spiers, William Clark, St. Mary's Hospital.
Tordiffe, Arthur Murray Stewart, University College, Bristol.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates have passed in the under-mentioned subjects:—

Surgery.—Adams, E. G., Royal Free Hospital; Collinson, F. C., Leeds; Gough, E. M., Royal Free Hospital; Hedden, R., Guy's Hospital; Hughes, H., Liverpool; Lawrence, A. S., Middlesex Hospital; Silver, H. W., Charing-cross Hospital; Stamper, G. C., Guy's Hospital; Stewart, D. D., Liverpool; Tarbet, W. E., Sheffield; Thorne, M., Royal Free Hospital; and Whitmarsh, R. P. H., St. Thomas's Hospital.

Medicine, Forensic Medicine, and Midwifery.—Coker, A. P., Middlesex Hospital; Harmer, W. A., Aberdeen; Jones, R., St. Mary's Hospital; Langford, F. C., Charing-cross Hospital; Thorne, M., Royal Free Hospital; Welch, C., London Hospital; and Williams, H., Middlesex Hospital.

Medicine and Forensic Medicine.—Hort, E. C., Cambridge University and Guy's Hospital; and Merry, S. R., Charing-cross Hospital.

Medicine.—England, H., Sheffield; Graham, J. W. F., St. Bartholomew's Hospital.

Forensic Medicine and Midwifery.—Adams, E. G., Royal Free Hospital; Jones, H. G., St. Mary's Hospital; and Yorath, T. H. B., Guy's Hospital.

Forensic Medicine.—Ramsay, H. W., St. Mary's Hospital; and Wright, A. M. St. J., Madras.

Midwifery.—Hulbert, G. P. Y., Birmingham; Jackson, G. C., Cambridge University and St. Mary's Hospital; Stamper, G. C., Guy's Hospital; and Vale, C. S., Paris.

To Messrs. England, Graham, Hedden, Jones, H. G., Jones, R., Lawrence, Ramsay, Stamper, Williams, and to Miss Gough and Miss Thorne was granted the diploma of the Society, entitling them to practise Medicine, Surgery, and Midwifery.

FOREIGN UNIVERSITY INTELLIGENCE. — *Gratz:* Dr. Alois Sachsalher has been recognised as *privat-docent* in Ophthalmology.—*Halle:* Dr. Eberth, Professor of Comparative Histology and Anatomy, has been appointed to the chair of Pathological Anatomy and General Pathology, in succession to Dr. Ackermann, retired; Dr. W. Roux of Innsbruck has been appointed to the chair vacated by Dr. Eberth.—*Kharkoff:* Dr. Barabasheff has been appointed Extraordinary Professor of Ophthalmology.—*Königsberg:* The title of Professor has been granted to Dr. G. Stetter, *privat-docent* in Surgery and Otology.—*Prague (Bohemian University):* Dr. J. V. Rohon has been appointed Extraordinary Professor of Histology.—*St. Petersburg:* Dr. Dogiel of Tomsk has been appointed Professor of Microscopical Anatomy.

THE DIFFUSION OF SMALL-POX.—The news as to small-pox prevalence continues to be of a favourable character, as the amount present in London, though small, is the largest contribution to the disease at the moment. During last week the number of patients suffering from small-pox in the metropolis removed to hospital was only 7, as against 21, 17, and 9 in the three weeks preceding; and the only death registered in the whole of the thirty-three towns of the Registrar-General's returns was in London, in the person of an unvaccinated infant of four months of age, which had been removed from the Bethnal Green sanitary area to the hospital ship "Atlas." The cases remaining in hospital at the close of the week have been steadily falling since the end of the fourth week of August, when they were 342, the number on Saturday last being only 119. These cases, however, cover a large area, as we learn of attacks as far apart as Shepherd's Bush in the west and Bethnal-green in the east; and on Monday of the present week there were three fresh cases in London. The Orsett board of guardians have been considerably exercised by the occurrence of cases of small-pox in the vicinity of the hospital ships at Long Reach, an outbreak at Purfleet and West Thurrock being placed to the credit of the small-pox ships in the river, ten of the eleven cases occurring within a mile of the ships, which the guardians desire to see placed lower down the river. In the four weeks ended Oct. 5th the small-pox cases notified in the whole of London totalled 108, an average of 27 per week, the average of the preceding like period having been 60, and 70 in the September four-weekly periods, so that the disease is showing much decline; and of the twenty-three sanitary areas (out of forty-three) invaded five only, and these all east and south, accounted for 69 of the 108 attacks, Bethnal Green being credited with 31 and Camberwell with 14. The news from the provinces shows that small-pox cases are but few. Essex alone in the districts adjacent to the Thames reports recent invasion. In Dublin the figures of the week ended Oct. 12th are much more favourable than in the week before. Only a single case was removed to hospital, and the remaining patients fell in number from 27 to 24, though one death was registered—namely, in an adult over forty years of age, and stated to have been vaccinated. Much discussion is going on now in the city on the vexed question of accommodation for the isolation of small-pox cases in the future, and the medical and sanitary world seems divided as to the danger or otherwise of isolating small-pox in the midst of the city population. We hope that wise counsels will prevail and secure the removal of all cases outside the range of populations of any magnitude. Some amount of friction has recently arisen at Bo'ness, in Linlithgowshire, on account of the removal to hospital by the sanitary inspector of the relatives of a small-pox patient notified in the borough, the medical officer and the local authority being at loggerheads on the point as to whether the inspector had any right to remove other than the immediate attendant on the patient. However, a compromise seems to have been arranged by the dismissal to their home of the quarantined relatives.

SERIOUS SEWER EXPLOSION.—A serious explosion took place at Farnham recently—where the Bishop of Winchester's castle is situated—in one of the public sewers. A town labourer had occasion to enter the man-hole where several sewers meet, and held a lighted candle in the mouth of one of them. Instantly there was an explosion, and the gas is said to have ignited and burnt in "variously coloured flames." A fellow workman went to the injured man's assistance, and medical aid was at once procured. The man was found to be suffering from severe burns and shock to the system. A doubt is expressed as to the nature of the gas which was confined, but it is well known that pent-up sewer gases contain hydro-carbons consisting chiefly of marsh gas, and therefore it is always a risky proceeding to examine a sewer with a naked light until the sewer has been ventilated. The fact of the accumulation of gases in the present instance speaks ill for the thorough ventilation of the drains.

DIPHTHERIA IN LONDON.—The condition of London in the matter of diphtheria prevalence is growing from bad to worse, and to-day the actual mortality from that disease in the metropolis is more than 40 per cent. in excess of the corrected average for the fortieth week of the last decennial period. The data for the four-weekly period ended Oct. 5th show that in that period as many as 1178 cases of diphtheria were notified in the metropolis, 41 of the 43 separate sanitary areas having suffered from the malady. Not only so, but in nine of those areas there were as many as 682 notifications, Greenwich having 114 to its credit, and 100 being placed to the credit of Camberwell. The weekly average was for London 295 attacks, as compared with only 202 in the preceding period of like length, and this shows a rise of very nearly 50 per cent. The registered deaths in this period to the 5th of the present month reached a total of 192, a weekly average of 48, or 16 per cent. of the notified cases; and the admissions to hospital 423, or only 36 per cent. of those cases. In the two weeks that have since elapsed the deaths have been respectively 56, or 17 above the corrected average, and last week the abnormal total of 76, or as many as 34 in excess of the average. In the fortnight we find the Registrar-General crediting sanitary areas as follows: to St. Pancras and Greenwich, each, 12 deaths; to Islington, Kensington, and Camberwell respectively 6 deaths; to Marylebone and Mile End Old Town, each, 5 deaths; and to Fulham, Shoreditch, and Battersea, respectively, 4 deaths. In the two weeks together only 2 of the 132 deaths occurred in persons aged over twenty years. Complaints are being made in several parts of the metropolis as to the difficulty found in securing the removal to hospital of many cases needing such removal, and the small percentage of removals to cases occurring seems to warrant the feeling that is abroad as to the necessity for a larger amount of isolation accommodation for fever patients. The admissions in the last two weeks have been 102 and 115; and the numbers of patients remaining under treatment on each of the last two Saturdays have been respectively 659 and 667. In the outer ring of the metropolis the deaths from diphtheria have been 27 in each of the last two weeks, and they have been located in the West Ham registration district to the number of 23; in Waltham Abbey district, 4; in Edmonton, 4; and 3 in Isleworth. So that the matter is not only of serious import to London county, but it is assuming serious proportions also in the extra-urban portions of the metropolis, even as far out as Waltham Abbey on the north. Indeed, the Edmonton union would appear to be passing through a diffused epidemic of limited extent at present, but none the less of a growing character.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN.—The opening meeting of the new session of this society will be held on Monday, Nov. 4th, at 8 o'clock, when the President, Mr. David Hepburn, will deliver the inaugural address.

LITERARY INTELLIGENCE.—Mr. William F. Clay of Edinburgh will publish shortly an authorised English edition of the "Histo-pathology of the Diseases of the Skin," by Dr. Unna of Hamburg, translated by Dr. Norman Walker, Assistant Physician in Dermatology, the Royal Infirmary, Edinburgh. This new edition will be revised with additions by the author and will include forty-four additional illustrations specially drawn for this edition.

SUNDAY LECTURE SOCIETY.—The first of the series of lectures given by this society was delivered on Sunday afternoon last, Oct. 20th, in St. George's Hall, Langham-place, when Professor Sir Frederick Pollock, Bart., M.A., LL.D., lectured on "Tyndall as Worker and Teacher." Mr. C. W. Kimmins, M.A., D.Sc., will lecture on Sunday next, and the Rev. Stewart Headlam, B.A., Prince Kropotkin, Mr. Graham Wallas, M.A., Mr. Wyke Bayliss (President of the Royal Society of British Artists), and Mr. R. D. Roberts, M.A., D.Sc., on subsequent Sundays.

BRADFORD INFIRMARY EXTENSION.—The new buildings which have just been opened by the Hon. H. E. Butler, High Sheriff of Yorkshire, constitute a valuable addition to this infirmary. The estimated cost of the extension is £6000, but the new arrangements for heating and cooking will effect a saving of £200 a year. It is noteworthy that the institution, which, seventy years ago, began work with only 4 in-patients, treated in 1894 2086 in-patients. One desirable addition to the existing buildings is the observation ward, where suspected infectious cases will be isolated until the nature of the disease has been defined.

TORQUAY MEDICAL SOCIETY.—The annual meeting of this society was held at the Torbay Hospital on Oct. 2nd, and the following gentlemen were elected to take office during the current year. President: R. Pollard. Vice-President: T. Finch. Hon. Secretary: G. Young Eales (re-elected). Council: F. Thistle, F. Crowdy, Winwood Smith, and W. Powell. Hon. Librarian: A. Watson. Hon. Auditors: F. E. Cave and H. Cumming. A special meeting was held on Oct. 4th, Mr. R. Pollard, President, being in the chair, to hear an address by Mr. J. Hutchinson, F.R.C.S., F.R.S., on Heredity in Disease. The meeting was well attended, the audience including many members of the profession from Exeter, Plymouth, and the neighbouring towns to whom invitations had been sent. The annual dinner of the society, which was largely attended, was held the same evening at the Albert Hall, the president being in the chair.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ALDOUS, G. F., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer, Plymouth Public Dispensary.

BELBEN, F., M.B., B.C. Cantab., F.R.C.S., M., L.R.C.P. Lond., has been appointed Senior House Physician, St. Bartholomew's Hospital.

BENNETT, A., HUGHES M.D. Edin., F.R.C.P. Lond., has been appointed Consulting Physician to the Hospital for Epilepsy and Paralysis, Regent's-park.

BENNETT, W. E., F.R.C.S. Eng., has been appointed Senior House Surgeon to the Metropolitan Hospital.

BOTTOMLEY, F. C., M.B., B.C., B.A. Cantab., has been appointed Senior Resident Medical Officer to the Royal Free Hospital, Gray's-inn-road, London, vice W. H. Bowring.

BUCHAN, W. A., M.B., C.M. Edin., has been re-appointed Medical Officer, Plymouth Public Dispensary.

BURNETT, F. M., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed Junior House Physician, St. Bartholomew's Hospital.

CALVERLEY, J. E. G., L.R.C.P. Lond., M.R.C.S., has been appointed Senior House Physician to the Metropolitan Hospital.

CHRISTOPHERSON, J. B., M.B., B.C. Cantab., has been appointed Senior House Physician, St. Bartholomew's Hospital.

COLLINGS, D. W., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed Junior House Physician, St. Bartholomew's Hospital.

CORNISH, S., L.R.C.P. Lond., M.R.C.S., has been appointed Junior House Surgeon, St. Bartholomew's Hospital.

COSENS, WM. BURROUGH, L.R.C.P., Lond., M.R.C.S., has been appointed Honorary Surgeon to the Dorset County Hospital, vice G. A. George, resigned.

DRAKE, C. H., L.R.C.P. Lond., M.R.C.S., has been appointed Senior House Surgeon, St. Bartholomew's Hospital.

DUNN, W. E. N., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant House Physician to the Metropolitan Hospital.

EMSON, A., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Workhouse of the Dorchester District of the Dorchester Union.

FOX, G. R., L.R.C.P. Lond., M.R.C.S., has been appointed Junior House Physician, St. Bartholomew's Hospital.

GILES, L., L.R.C.P. Lond., M.R.C.S., has been appointed Junior House Surgeon, St. Bartholomew's Hospital.

GUTHRIE, LEONARD GEO., M.D. Oxon., M.R.C.P. Lond., has been appointed to the charge of In-patients in addition to that of Out-patients at the Hospital for Epilepsy and Paralysis, Regent's-park.

HAMPTON, T., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant House Surgeon to the Metropolitan Hospital.

HEDLEY, W. S., M.D. Edin., M.R.C.S. Eng., has been appointed Medical Officer in charge of the Electrical Department, London Hospital.

HEWER, C. M., L.R.C.P. Lond., M.R.C.S., has been appointed Junior House Surgeon, St. Bartholomew's Hospital.

HOGARTH, R. G., F.R.C.S. Eng., L.R.C.P. Lond., has been appointed Senior Resident Medical Officer to the General Hospital, Nottingham.

HOOD, N. L., M.B., B.C. Camb., has been appointed Assistant House Surgeon to the Sussex County Hospital.

JACKMAN, J. J. H., L.R.C.P., L.M., L.R.C.S. Irel., has been appointed Medical Officer to the Waterford Workhouse.

LAMPLOUGH, C., M.R.C.S., L.R.C.P. Lond., has been appointed resident Clinical Assistant to the St. Marylebone Infirmary, vice L. N. Gibbes, resigned.

LEE, W. R., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed Senior House Physician, St. Bartholomew's Hospital.

LINDSAY, D. LAUDER, L.R.C.P. & S. Edin., L.F.P.S. Glasg., has been appointed House Physician to the Glasgow Royal Infirmary.

MARTIN, RICHARD STANLEY, L.R.C.P., L.R.C.S. Edin, L.F.P. & S. Glasg., has been appointed Medical Officer and Public Vaccinator for the Lever District of the Bolton Union, vice J. Martin, deceased.

MICHELL, R., M.B., B.C., F.R.C.S. Eng., has been appointed Junior House Physician, St. Bartholomew's Hospital.

MURPHY, J. K., L.R.C.P. Lond., M.R.C.S., has been appointed Senior House Physician, St. Bartholomew's Hospital.

PHILLIPS, L. C. P., M.B., B.C. Cantab., L.R.C.P. Lond., M.R.C.S., has been appointed Senior House Surgeon, St. Bartholomew's Hospital.

POWERS, C. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Gosforth Sanitary District of the Whitehaven Union.

POOLE, S., M.B., M.S. Edin., has been appointed Medical Officer for the second Wolverhampton Sanitary District of the Wolverhampton Union.

POYNDER, F. C., M.B., B.Ch. Oxon., L.R.C.P. Lond., M.R.C.S., has been appointed Junior House Physician, St. Bartholomew's Hospital.

RENDLE, A. C., M.B., B.C. Camb., L.R.C.P. Lond., M.R.C.S., has been appointed Physicians' Assistant, Plymouth Public Dispensary.

ROGERS, K., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed Senior House Physician, St. Bartholomew's Hospital.

ROUE, W. BARRETT, M.D., M.S., has been appointed Consulting Physician to the Bristol Hospital for Sick Children and Women.

THOMAS, T. W., M.R.C.S., has been appointed Medical Officer for the Caerphilly Sanitary District of the Pontypridd Union.

THOMPSON, GEO. R., has been appointed Analyst for the Borough of Neath.

WATT, J. L., M.B., M.S. Aberd., has been appointed Medical Officer for the second division of the third district of the St. German's Union.

WHITE, C. P., L.R.C.P. Lond., M.R.C.S., has been appointed Senior House Surgeon, St. Bartholomew's Hospital.

WILLIAMS, E. H., M.R.C.S., has been appointed, *pro tem.*, Medical Officer for the Carnarvon Workhouse.

WILSON, W. C., M.B., C.M. Edin., has been reappointed Physicians' Assistant, Plymouth Public Dispensary.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BRISTOL HOSPITAL FOR SICK CHILDREN AND WOMEN.—House Surgeon. Salary £100 per annum, with rooms and attendance (not board).

BROWN ANIMAL SANATORY INSTITUTION.—Professor-Superintendent. Salary £250 per annum. Applications to the Registrar of the University of London, Burlington-Gardens, W.

CATERHAM ASYLUM (under the Metropolitan Asylums Board).—Second Assistant Medical Officer. Salary £120 per annum, rising £10 annually to £150, with board, furnished apartments, attendance, and washing. Applications to the Clerk to the Board, Chief Offices, Norfolk-street, London, W.C.

CITY OF DUBLIN HOSPITAL.—Visiting Surgeon. Applications to Hon. Sec., Medical Board, City of Dublin Hospital, Upper Baggot-street, Dublin.

CITY OF SHEFFIELD.—Assistant Resident Medical Officer of the two City Hospitals for the Treatment of Cases of Infectious Disease. Salary £120 per annum, with board, lodging, and attendance. Applications to the Town Clerk, Town Clerk's Office, Sheffield.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.—Head Dispenser. Salary £160 per annum.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, W.C.—House Physician, for six months. Salary £20, with board and residence in the Hospital. Also, House Surgeon, for six months. Salary £20, with board and residence in the Hospital.

HULL BOROUGH ASYLUM.—Assistant Medical Officer, unmarried. Salary 100 guineas per annum, with board (no liquors), lodging, and washing. Applications to the Town Clerk, Town Hall, Hull.

HULL AND SCULCOATES DISPENSARY, Parliament-street, Hull.—House Surgeon. Salary £200 per annum, with house (unfurnished), coals, and gas.

LIGHTBURN HOSPITAL FOR INFECTIOUS DISEASES, Shettleston, near Glasgow.—Resident Physician. Salary £120 per annum, with board, lodging, washing, and attendance. Applications to the Clerk of the Joint Committee, 194, Ingram-street, Glasgow.

ROYAL SOUTH HANTS INFIRMARY, Southampton.—Assistant House Surgeon for six months. A gratuity of £10 will be given if found satisfactory.

ST. MARY'S HOSPITAL FOR SICK CHILDREN AND MEDICAL MISSION DISPENSARY, Plaistow, London, E.—Resident Medical Officer. Salary £80, with board, washing, and attendance. Applications to Chairman of Committee, Rev. T. Given-Wilson, Plaistow.

STOCKTON AND THORNABY HOSPITAL, Stockton-on-Tees.—House Surgeon (non-resident). Salary £200 per annum.

SUNDERLAND INFIRMARY.—House Physician. Salary £30, rising £10 annually to £100, with board and residence.

WHITEHAVEN AND WEST CUMBERLAND INFIRMARY, Whitehaven.—House Surgeon. Salary £120 per year, and £30 per year for Dispensing, with furnished apartments and attendance.

Births, Marriages, and Deaths.

BIRTHS.

EDWARDS.—On Oct. 17th, at Banbury, Oxon., the wife of Henry J. Edwards, L.R.C.P. Edin., of a son.

HARDYMAN.—On Oct. 18th, at Great Pulteney-street, Bath, the wife of George Hardyman, M.B. Edin., of a son.

LEAKE.—On Oct. 18th, at Nightingale-place, Woolwich, the wife of Surgeon-Lieut.-Colonel George Dalton Nugent Leake, Army Medical Staff, of a son.

MARRIAGES.

BAKER—SMITH.—On Oct. 17th, at St. Thomas's, Portman-square, by the Ven. Archdeacon Smith, uncle of the bride, assisted by the Rev. W. De Foe Baker, uncle of the bridegroom, and the Rev. Percy Thompson (Vicar), Charles Ernest Baker, M.B. Cantab., F.R.C.S. Eng., of 5, Gledhow-gardens, South Kensington, to Ada Marion, third daughter of Thomas Smith, Esq., F.R.C.S. Eng., of 5, Stratford-place, W.

BROOKE—MOORE.—On Oct. 16th, at the parish church, Duffield, Derbyshire, Frederick Brooke, M.R.C.S. Eng., L.R.C.P., elder son of Thomas George Brooke, M.R.C.S. Eng., of Langport, Somersetshire, to Constance Blanche, fourth daughter of the Rev. Francis Wellington Moore, Vicar of Duffield.

FRANEY—LANSDOWN.—On Oct. 16th., at St. Paul's Church, Clapham, Arthur Britten Franey, L.R.C.S., L.R.C.P. Edin., Hadleigh, Suffolk, to Amy Estelle, daughter of the late T. W. Lansdown, J.P., of Plymouth.

STEEGMANN—BARNETT.—On Oct. 15th, at St. George's Church, Barrow-in-Furness, by the Ven. Archdeacon Phillips, Edward J. Steegmann, M.B., of Grove-park, Chiswick, to Mabel, daughter of Rear-Admiral Barnett, of Barrow.

WYNTER—WILLS.—On Oct. 19th, at St. Paul's, Clifton, by the Rev. Canon Mather, assisted by the Rev. Canon Dacre, Walter Essex Wynter, M.D., B.S.Lond., M.R.C.P., F.R.C.S., of 30, Upper Berkeley-street, Portman-square, London, W., eldest son of the late Dr. Andrew Wynter of Chiswick, to Ada Margaret, third daughter of Samuel Wills, Esq., J.P., of 1, Royal-park, Clifton.

DEATH.

BETTS.—On Sept. 4th., at Antofagasta, Chili, of pneumonia, Frederick Bernard Betts, M.R.C.S. Eng., L.R.C.P. Lond. aged 28, eldest son of J. F. H. and Catharine J. Betts, of 83, The Chase, Clapham Common.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY.—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. C. B. Keetley: Cases of Intestinal Resection and Intestinal Exclusion.—Mr. H. Allingham: A Series of cases of Intestinal Resection.

WEDNESDAY.—NORTH-WEST LONDON CLINICAL SOCIETY (North-West London Hospital).—8.30 P.M. Sir R. Quain: Some General Remarks on Professional Topics. (Presidential Address.)

THURSDAY.—HARVEIAN SOCIETY.—8.30 P.M. Dr. Goodhart will open a Discussion on "Spasmodic Asthma and its Treatment."

FRIDAY.—WEST KENT MEDICO-CHIRURGICAL SOCIETY.—8.15 P.M. Mr. Mayo Collier: Chronic Nasal Obstruction.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY (West London Hospital, W.).—8.30 P.M. A Discussion on "Gastric Ulcer" will be opened by Dr. Hood and Mr. Bruce Clarke. Drs. Alderson, Drewitt, Campbell Pope, S. Taylor, and Mr. Keetley will take part in the Discussion.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY.—LONDON POST-GRADUATE COURSE.—London Throat Hospital, Great Portland-street, W., 8 P.M., Mr. G. C. Wilkin: Aural Polypi.

TUESDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Percy Smith: Developmental Insanity, Circular Insanity.

WEDNESDAY.—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Gowers.

HOSPITAL FOR CONSUMPTION &c. (Brompton).—Dr. J. K. Fowler: Bronchitis.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—5 P.M. Dr. Morgan Dockrell: Tuberculosis of the Skin.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. Ball: Throat Cases.

THURSDAY.—LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Gt. Ormond-st., 3.30 P.M., Mr. W. Arbuthnot Lane: Selected Surgical Cases.—National Hospital for the Paralysed, Bloomsbury, 2 P.M., Dr. Beevor: Muscular Atrophy.—Central London Sick Asylum, Cleveland-st., 5.30 P.M., Dr. T. Henry Green: Cases in the Wards.

FRIDAY.—LONDON POST-GRADUATE COURSE.—King's College, 3 to 5 P.M. Prof. Crookshank: Tuberculosis and Leprosy.

SATURDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 11 A.M., Dr. Percy Smith: Climacteric and Senile Insanity.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-sq., W.C.).—Dr. Morgan Dockrell: Syphilis.

During the week marked copies of the following newspapers have been received:—*Walsall Advertiser, Hackney Mercury, St. Andrew's Citizen, Batley Reporter, Morning Leader, Chester Chronicle, Brighton Gazette, Wolverhampton Chronicle, Rochdale Observer, Bradford Observer, Belfast News Letter, Sydney Morning Herald, Newcastle Chronicle, Halifax Guardian, Birmingham Mail, Irish News, Glasgow Herald, Leicester Daily Post, Sheffield Independent, Builder, Liverpool Daily Post, Times of India, Architect, City Press, Pioneer Mail, Bristol Mercury, Lymington and South Hants Chronicle, Leeds Mercury, Buchan Observer, Yorkshire Post, Local Government Chronicle, Reading Mercury, Weekly Free Press and Aberdeen Herald, West Middlesex Standard, Mining Journal, Hertfordshire Mercury, Southampton Echo, Crewe Guardian, Surrey Advertiser, Evening News (York), Local Government Journal, Elgin Courant, Orkney Herald, Waterford Mirror, Torquay Directory, Montreal Herald, St. Bartholomew's Hospital Journal, Dorset and Somerset Standard, Farringdon Advertiser, Royal Cornwall Gazette, Warwickshire Times, Western Mail, Scotsman, Tonbridge Telegraph, &c., &c.*

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Oct. 24th, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Rainfall.	Remarks at 8.30 A.M.
Oct. 18	30·51	N.E.	45	43	67	55	40	...	Foggy
,, 19	30·41	E.	51	49	59	54	45	...	Foggy
,, 20	30·27	S.W.	52	49	56	53	50	...	Foggy
,, 21	30·04	S.W.	45	44	65	53	43	...	Foggy.
,, 22	29·71	N.	44	44	47	45	44	0·06	Raining
,, 23	29·58	N.E.	42	40	52	46	40	0·43	Overcast
,, 24	29·52	W.	33	32	65	44	31	...	Hazy

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

FEES AND THE LOCUM-TENENT.

A CORRESPONDENT writes:—"A few weeks ago I had occasion, when acting as locum-tenent in Scotland, to sign a lunacy certificate. To whom does the fee go? Am I entitled to it, or does it go to the principal? There is a difference of opinion amongst the members of the profession in regard to the above." To this we have to say that all fees made or earned by a locum-tenent are obviously due to the practitioner whose place he is holding, in the absence of any special contract to the contrary. Occasionally it happens that a fee represents some unusual duty or service, when there is much to be said for its being divided between the principal and his assistant, but this is a matter of grace on the part of the principal.

Dr. Augustus H. Bampton is thanked for his interesting communication with regard to the procuring of immunity from malarial fever. The treatment suggested, however, is, in the present state of our knowledge, a little visionary, and we do not think that its promulgation would serve any practical purpose.

H. B. would be glad to hear of any recent book on Cottage Hospitals and Convalescent Homes and the publisher's name.

"PERSISTENT HICCOUGH AND SNEEZING: A SUGGESTION WANTED."

To the Editors of THE LANCET.

SIRS,—If there be no lesion of the cerebrum the case is most likely of the rheumatic gout nature. Salicin in thirty-grain doses three times a day will effect a cure in four days or less, if my surmise be correct. If the case should be due to organic nervous system derangement producing an erythematous condition of the nasal, pharyngeal, and gastric mucous tracts of an intermittent nature, small doses of arsenic, nux vomica, and iron three times a day, with milk and lime-water night and morning, will be the remedy. I have known a case of a gentleman affected with sneezing which suddenly attacked him after intervals of a few weeks, and lasted day and night continually. I have known a case where hiccough, sneezing, and laryngeal asthma were periodic visitants. Arsenic and tonics relieved the first; salicin cured the second. I am, Sirs, yours truly,

Kingstown, Oct. 21st, 1895. JOHN ROCHE, M.D.

MEDICAL WORK AND ITS REMUNERATION IN WALES.

THE *Western Mail* says that a movement is on foot at Llanelly to secure an increase in the fees paid to the medical officers of the various works. At present the payment is only 9*d.* per month to cover medical attendance for each workman and his family. In other towns the rate is 1*s.* Some have already conceded the very reasonable demand, but at Morewood's Works it is intimated that if the medical attendant is not satisfied his resignation will be accepted. We trust that the workmen here will reconsider their resolution and the inadequacy of the pay of the medical man. If they do not, and drive the present holder to resignation, it will be discreditable to any medical man to take the vacated post. Nine shillings a year for medical attendance on a man and his family who are in receipt of good Welsh wages is not just.

Dr. H. Harley.—The Sickness and Accident Assurance Association, Ltd., of 64, Moorgate-street, E.C., offers insurance of the kind indicated by its title to professional men; and the Medical Sickness, Annuity, and Life Assurance Society, of 33, Chancery-lane, E.C., covers the sickness risk. But we are not able to decide upon the comparative merits or competing claims of these two societies.

Mr. John Newton.—We never give medical advice or recommend treatment, and regret that we can be of no service. Our advertisement columns contain the addresses of many institutions that might serve our correspondent's purpose, and his medical attendant can help him to a choice between them.

A. Z.—There does not seem to be any publication containing the desired information. Particulars concerning the meteorological qualities of any specified locality can always be obtained, but such a comprehensive work as our correspondent seeks has yet to be written.

H. S.—The "Laboratory Guide," by A. H. Church, M.A., F.R.S. (Gurney and Jackson, 1, Paternoster-row).

Joseph S. P. has neglected to supply us with his full name and address.

"A FEMALE MEMBER OF THE ARMY MEDICAL STAFF."

To the Editors of THE LANCET.

SIRS,—As the correspondence on Dr. James Barry's strange history makes little or no mention of her military career, may I be allowed to supplement my letter in THE LANCET of last week with a few particulars?

Reference to Hart's Army List for the year 1865 will show that "James Barry" stands at the head of the list of Inspectors-General of Hospitals. In July of that year the *Times* one day announced the death of Dr. Barry, and the next day it was officially reported to the Horse Guards that the Doctor was a woman. She was buried at Kensal Green, and over her grave was erected a tablet with the simple inscription: "James Barry. Born ? Died 1865." These facts, the proceedings of the inquest, and the registry of her death should be still available as verification of the Doctor's sex. The dates of her several commissions in the army will be found as follows; but it is very remarkable that the grades of "Surgeon," "Assistant Inspector," and "Brevet Deputy Inspector" of Hospitals were passed over in her case:—Hospital Assistant, July 5th, 1813; Assistant Surgeon, Dec. 7th, 18 5; Surgeon-Major, Nov. 22nd, 1827; Deputy Inspector of Hospitals, May 16th, 1851; Inspector General of Hospitals, Dec. 7th, 1858; retired on half-pay, July 19th, 1859; Died, July, 1865. In "Fifty Years of my Life," by the late Earl of Albemarle, at page 95, vol. ii., will be found some interesting comments on Dr. Barry's services and death. He says: "A mystery attached to Barry's whole professional career, which extended over more than half a century. While at the Cape he fought a duel and was considered to be of a most quarrelsome disposition. He was frequently guilty of flagrant breaches of discipline, and on more than one occasion was sent home under arrest; but somehow or other his offences were always condoned at headquarters. ..... It is singular that neither the landlady of *her* lodging nor the black servant who had lived with her for years had the slightest suspicion of her sex. The late Mrs. Ward, daughter of Colonel Tidy (Military Secretary, Jamaica, 1856, and at the Horse Guards, 1865), from whom I had these particulars, told me further that she believed the Doctor to have been the legitimate granddaughter of a Scotch earl whose name I do not now give, as I am unable to substantiate the correctness of my friend's surmise, and that the *soi-disant* James Barry adopted the medical profession from attachment to an army surgeon who has not been many years dead." In a letter to me from Surgeon-General McKinnon he states that he found Dr. Barry to be "a pleasant and agreeable man. He neither cursed nor swore, but behaved himself like a gentleman. I have heard many reports about him, and the most of them were false, the people making them being obviously interested parties. I never heard of his ever being an operator of any kind, nor do I think he ever had any opportunity of showing his skill in that line." On the other hand, Surgeon-General Longmore, writing to me from Netley in 1882, says: "I acted as P.M.O. at Trinidad for nearly a year shortly after Dr. Barry vacated the post. I also saw her in the Crimea, when staying with Lord Raglan on a visit." And in an appreciative comment on my treatment of the case in the character of *Dr. Fitzjames* in my novel, "A Modern Sphinx," he adds: "Some years ago a French writer in a history of 'Le Médecin Militaire' remarked: 'Le fait en lui-même ne laisse aucun doute; et cependant je doute fort que Miss Braddon elle-

même oserait jamais faire de cette personne l'héroïne d'un de ces romans.' *You* have accomplished what the writer evidently thought no one dare do."

I could tell several amusing stories of Dr. Barry's "mistaken identity," as, for instance, that of the adjutant of a regiment in Jamaica requesting the Doctor to discontinue visiting his wife just at the hour he had to be on parade or in the orderly room. But most of these anecdotes I have interwoven into my novel, "A Modern Sphinx," or its reproduction, "Madeline's Mystery," either of which volumes may no doubt be found in some of the numerous libraries of the country.

I am, Sirs, yours faithfully,

Savage Club, Oct. 21st, 1895. B. ROGERS, Lieutenant-Colonel.

To the Editors of THE LANCET.

SIRS,—I have great pleasure in sending you my recollections of "James Barry," the lady surgeon referred to in your columns.

It was in the year 1844, I think, that I was sent from Barbadoes to Trinidad to sit on a general court-martial, which was exciting great interest in the islands at that time. On the assembling of the court an individual appeared as spectator who at once attracted my attention. He was in the full dress of an army surgeon, but had all the appearance of being a woman. On making inquiries I was told that the individual was Dr. Barry, the principal medical officer of the district. The impression and general belief were that he was a hermaphrodite, and as such he escaped much comment or observation in places where everyone was used to him. But I was under the belief that there had never existed a true human hermaphrodite; so that I was convinced James Barry was a woman about sixty years of age, and being much interested in him I cultivated his acquaintance and we became very friendly. He frequently asked me to visit him, and I endeavoured to draw out his antecedents, but found him very reticent. The only thing that I discovered was that Lord Fitzroy Somerset (afterwards Lord Raglan) was a friend of his, from which I inferred that it was to him Barry owed his high position. He was a vegetarian and drank only water.

Some years ago I read of his death, and that his sex had been discovered, as well as traces of his having borne a child.

I am, Sirs, yours faithfully,

Oct. 17th, 1895. CAPTAIN.

*** We have received the above letter from an intimate acquaintance of the late Dr. James Barry through Mr. Henry Taylor, F.R.C.S., of Quarry-street, Guildford, who, remembering that he had heard a gentleman speak of having made this curious person's friendship, kindly wrote in our behalf for particulars. Mr. Taylor also refers those of our readers who are interested in the case of James Barry to "a capital story of a Spanish nun, in the seventeenth or eighteenth century, who enlisted in the army and served with much credit in the West Indies and Spanish Main, written by M. de Hérédia, the French poet, and purporting to be a true history." Several correspondents also refer us to the account of James Barry given in Taylor's "Principles and Practice of Medical Jurisprudence," edited by Dr. Thomas Stevenson, fourth edition, vol. ii., p. 290. This chapter contains allusions to the Chevalier D'Eon and several other of the more notorious impersonators of sex.—ED. L.

WHAT IS LIFE?

To the Editors of THE LANCET.

SIRS,—As this subject is discussed separately in the current issue of THE LANCET by no fewer than three great authorities—Professor Beale, Professor Rindfleisch, and Sir James Crichton Browne—it is evidently of more present interest than I had supposed. To my understanding, however, the problem is about as hopeful as the process described in one of Æsop's fables—"Viper gnawing file"! Many years since I read both Büchner and Beale, but of course with no decisive result, though I considered that the former had the better case. In later years I have read Huxley, and agree with him that there is no prospect—as I have already stated—of the question being settled, and that, therefore, of the three alternatives—materialism, animism, and agnosticism—the only rational choice is, unsatisfactory as it may be, to candidly, if not cordially, accept the last, provisionally at any rate. If that is so, are not the scientific gentlemen in question rather too dogmatic against what Professor Rindfleisch calls "the tyranny of materialism"? I cannot but think that animism, whether old or new, is more presumptive and difficult of acceptance than materialism, and that Huxley's agnosticism bids fair to hold the field for long enough against all positivism on the subject. So far the thing is an inscrutible mystery, and it is, therefore, foolish to conjecture about it.

I am, Sirs, yours faithfully,

Oct. 21st, 1895. ONLY A MEDICO.

THE MORPHIA HABIT.

To the Editors of THE LANCET.

SIRS,—Would any of your readers who have had experience in the treatment of the above do a great kindness by naming the best work on this subject, and stating whether or not there is any drug or means of mitigating the suffering during the treatment? Is the morphia habit less likely to be acquired by one who takes it for *bonâ-fide* suffering than by one who has either been carelessly slow in giving it up after recovery or who indulges in it for mere pleasure? I write on behalf of a great sufferer who is compelled, and will be for some time, to use hypodermic injections.—I am, Sirs, yours faithfully,

Oct. 21st., 1895. VIGILANS.

THE EFFECT OF HEAT.

THE *American Meteorological Journal* for October contains a paper by Mr. B. S. Pague on "Sensible Temperature, or the Effect of Heat on the Body in California." Over the great valleys of the Sacramento and San Joaquin, and over that large area of the State removed from the immediate coast and south of the Tehachapi Mountains, maximum temperatures of from 106° to 118° are experienced during the summer months, and as high as 122° have been recorded in Death Valley in July. The temperatures noted are from Weather Bureau records, and show the temperature of the air, the thermometer being in the shade in a standard thermometer shelter. Mr. Pague states that the reason these temperatures do not kill is that, while the degree of heat noted is that which is actually recorded, that which is known as the sensible temperature is about 40° less, dependent upon the amount of moisture in the air, and it is this sensible temperature which affects life. By sensible temperature is meant that which is felt at the surface of the skin where the skin is exposed, as on the face or hands. This temperature is obtained from the usual form of wet-bulb thermometer. The highest temperatures on record at San Francisco during the months from June to September, inclusive, average 95°, while the sensible temperatures on the same days average 65°. At Yuma the average highest is 116°, and the average sensible temperature at the time of highest air temperature is 75°. This shows that, while high temperatures prevail at periods of the year, the temperature which the body is required to endure is about 35° less than the air temperature recorded, and this difference is due to the amount of moisture in the air. If the air were as moist as is found in the region of the Great Lakes and along the Atlantic seaboard, and the temperature as high as it now is at times, the effect of the heat would be to kill by what is called sunstroke the greater number of the population, to destroy vegetation, and to desolate the country that now produces as much and as great a variety as does the most favoured section of the globe.

Mr. K. P. Popat.—Our Students' Number contains full information as to the examining boards of the United Kingdom and their requirements. It would be impossible to give our correspondent this sort of information about America, where every State can make its own arrangements.

H. A. C.—We do not identify the author of the testimonial to Rudd's remedy. The name and description do not exactly correspond to any in the Medical Register. Can our correspondent give us exact particulars of name, address, &c.?

M.R.C.S., L.S.D.—The situation our correspondent describes to us is decidedly galling, but he will understand that we cannot express an opinion upon it unless both sides of the question are made clear to us.

WANTED, AN EXPLANATION OR A SUGGESTION.

To the Editors of THE LANCET.

SIRS,—Would any of your readers give me an opinion on the following case? A child aged eight years was revaccinated a year ago. Four vesicles resulted, one of them imperfect. A growth subsequently appeared in each of the cicatrices, and at the present time the condition is as follows. There are three hard, freely movable masses of pink-coloured, smooth, shiny tissue of almost cartilaginous feeling. The masses are of almost the same size, oval, and about three-quarters by half an inch in their diameters, raised above the surface of the surrounding skin by about one-eighth of an inch. The outlines are regular, but the three masses are joined in their long diameters by thin portions of the same tissue about one-eighth of an inch long and one-sixteenth of an inch wide. A very much smaller mass occupies the site of the cicatrix of the abortive vesicle. The masses are quite painless, but as the patient is a little girl the unsightliness of the arm has to be considered. A brother of the child was revaccinated whilst away from home at school at about the same time, and he has developed precisely the same condition. The family history is very good and the children otherwise extremely healthy. What is the probable nature and cause of the growths, and are they likely to be of a keloid nature, when removal would not be advisable? What would be the most appropriate treatment to adopt?

I am, Sirs, yours truly,

Oct. 21st, 1895. CICATRIX.

A Subscriber.—No such work as our correspondent requires is known to us. The time has hardly arrived for such a summary of knowledge necessarily recent, but he will find scattered through our columns information embracing all the different points.

THE Liebig's Extract of Meat Co., of 9, not 6, Fenchurch-avenue, E.C., as printed in an analytical report in THE LANCET of Oct. 12th, point out that their new preparation is called *Peptonum Carnis*, and not "Extractum Carnis."

ERRATUM.—On page 1004 the words "75 millimetres," "50 millimetres," "33 and 36 millimetres," ought to have been respectively 75 μ, 50 μ, 33 and 36 μ. 75 μ are equal to 0·075 millimetre, and the other figures should be read in that proportion.

Communications, Letters &c. have been received from—

A.—Dr. A. J. Anderson, Pembroke; Mr. H. E. Armstrong, Newcastle-upon-Tyne; Mr. Appleton, Sheffield; Apothecaries' Hall, Lond., Sec. of; A., Ilfracombe.

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